

INDEX NUMBER

STATE DIVISION OF HEALTH
22 DEC 1953

the

Journal

*of the association for physical
and mental rehabilitation*



NOVEMBER-DECEMBER 1953

Vol. 7, No. 6

HANGER ACTIVE IN CINEPLASTY

CINEPLASTY — the use of cineplastic muscle motors for prostheses of arm amputees—is one of today's most promising arm prosthetic developments. It offers a bright future to the arm amputee, for it reduces the need for a harness, increases the utility of the prosthesis, and retains an amazing sense of kinesthetic touch.

Fundamental studies on muscle physiology in the cineplastic muscle motor have been conducted at the Army

Prosthetics Research Laboratory and Navy Medical Centers. HANGER has been extremely interested in cineplastic developments, and has furnished a number of Prostheses in connection with this research.

As a result of cooperation with cineplastic research, HANGER has developed the "Cinematic" Arm, designed for application to patients with cineplasty operations. Principles of simplicity, durability, light weight, alignment,

proper cosmetic appearance, and proper fitting of a comfortable socket have all been important considerations in the development of this new Cineplastic Prosthesis. In making the below elbow prosthesis, utilizing a biceps motor, the socket and forearm shell



FIG. 2. Showing below-elbow prosthesis on stump with muscle tunnel pin in place.

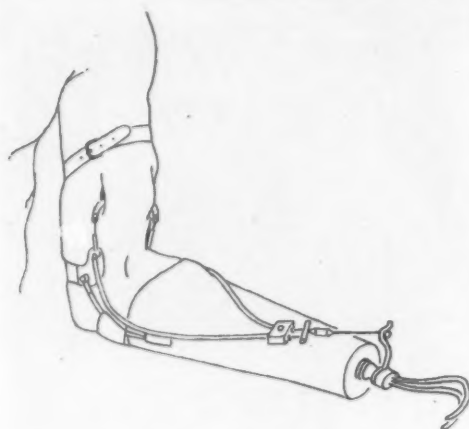


FIG. 1. Below-elbow cineplastic prosthesis with cables and terminal device fitted.

are constructed over a plaster reproduction of a stump. A wrist coupling is fitted at the terminal end of the forearm shell.

Whatever your interest or problem in appliances suitable for cineplasty or any phase of arm prosthetics, we are anxious to cooperate in every way possible. Please contact our local, or nearest, representative at any time.

Hanger
PROSTHESES

Atlanta 1, Georgia
Baltimore 1, Maryland
Birmingham 1, Alabama
Boston 16, Mass.
Charleston 2, W. Va.
Charlotte 2, N. C.
Chattanooga, Tenn.
Chicago 5, Ill.
Cincinnati 2, Ohio

Columbia 5, S. C.
Columbus 8, Ohio
Dallas 1, Texas
Indianapolis 2, Ind.
Jacksonville, Fla.
Knoxville, Tenn.
Memphis, Tenn.
Miami 37, Fla.

Mobile, Ala.
Montgomery, Ala.
Nashville, Tenn.
New Orleans 19, La.
New York 11, N. Y.
Oklahoma City 3, Okla.
Philadelphia 7, Pa.
Pittsburgh 30, Pa.

Raleigh, N. C.
Richmond 19, Va.
Roanoke 12, Va.
St. Louis 3, Mo.
Shreveport, La.
Tampa 2, Fla.
Toledo, Ohio
Washington 13, D. C.
Wilkes-Barre, Pa.

NOVEMBER-DECEMBER 1953

Volume 7

Number 6

Published Bimonthly
by the Association for
Physical and Mental Rehabilitation
Headquarters, 1472 Broadway, N. Y. 36, N. Y.
Telephone Bryant 9-9642

in this issue

EDITORIAL BOARD

- Arthur Abramson, M.D.Bronx, N. Y.
Chief, P. M. R. Service, Bronx, V.A. Hospital
Frederick J. Balsam, M.D.Memphis, Tenn.
Asst. Chief, P.M.R. Service, Kennedy V.A.-
M.T.G Hospital
Thomas F. Barrett, M.D.Chicago, Ill.
Manager V.A. Hospital, 333 E. Huron St.,
Chicago 11, Illinois
John Eisele Davis, Sc.D.Washington, D. C.
Chief, Corrective Therapy, P.M.R. Service
Edward D. Greenwood, M.D.Topeka, Kansas
Consultant to Children's Division, Menninger
Foundation
Arpad Paunz, M.D.Downey, Ill.
Chief, P.M.R. Service, V.A. Hospital
Carl Haven Young, Ed.D.Los Angeles, Cal.
Professor of Physical Education
University Southern California

EDITORIAL STAFF

EDITOR

Everett M. Sanders
1914 Poplar Avenue, Memphis, Tenn.

ASSOCIATE EDITORS

Paul B. Bell Stanley H. Wertz
James P. Callahan

CONTRIBUTING EDITORS

Max Houtchens, Ph.D., Washington, D. C.
Asst. Chief, Clinical Psychology Section, V.A.
Peter V. Karpovich, M.D., Springfield, Mass.
Professor of Physiology, Springfield College
Marcus Stewart, M.D., Memphis, Tenn.
Asst. Prof. of Orthopedic Surgery
University of Tennessee
Dana M. Street, M.D., Memphis, Tenn.
Chief, Orthopedic Surgery, VAMTG, Hospital
Raymond S. Weiss, Ed.D., New York
Asst. Professor Physical Education
New York University

DEPARTMENT EDITORS

Art—Charles W. McHugh
BOOK REVIEWS AND ABSTRACTS
Philip J. Rasch
Johannes Timmerman

CHAPTER ACTIVITIES

Arthur Landy

PRODUCTION EDITORS

R. Frank Smotherman Raymond J. Urbanik
Emmett B. Parr

CIRCULATION MANAGERS

Raymond J. Urbanik Charles W. McHugh

ADVERTISING MANAGER

Dominic Cuda
9251 W. Swan Circle, Milwaukee 16, Wisc.

SUBSCRIPTION RATES

Membership: Active, \$10.00; Professional, \$5.00;
Associate, \$4.00; Libraries, Organizations, \$5.00
Single Copies, \$1.00

ARTICLES

- The Problems of The Catatonic Patient—Har-
vey J. Tompkins, M.D.199
Behind The Catonic Defense—Richard L. Jenkins,
M.D.201
The Application of Activity Therapy Technique
for The Chronic, Regressed, Psychotic Patient
—Francis M. Marusak.205
Hand Dynamometer "Guard" — Rudolph Jahn
B.S.210
Emotional Components and Concomitants of
Pulmonary Tuberculosis—Allen R. Levin.211
An Exercise Program for Severely Disabled Pa-
tients—Paul J. Pastor, M.Ed.215

DEPARTMENTS

- FROM OTHER JOURNALS.219
EDITORIALS220
BOOK REVIEWS.221
CHAPTER ACTIVITIES.222
NEWS AND COMMENTS.222
BIBLIOGRAPHY225
INDEX229
CLASSIFIED DIRECTORY.236

Copyright 1953 by The Association for Physical and Mental Rehabilitation

THE JOURNAL OF THE ASSOCIATION FOR PHYSICAL AND MENTAL REHABILITATION

Information For Contributors

MANUSCRIPT: Manuscripts should not exceed ten (10) type-written pages; approximately 5,000 words. Manuscripts must be the original copy, not a carbon, typed double-spaced, with margins of one (1) inch for large type and one and a half (1½) inches for the small.

STYLE: Prepare manuscripts in conformity with the general style of the Journal. Retain a copy of the manuscript and duplicates of all tables, figures, charts, for future use should originals be lost in the mails.

ILLUSTRATIONS: Drawings and charts should be made with India ink for photographic reproductions as zinc etchings. Photographs must be 8 x 10 inches, high contrast, black and white, glossy prints. Printed captions and related information referring to photographs, must be typed and attached to the bottom of the photograph. All illustrations should not exceed 8 x 10 inches and are more acceptable when a smaller size does not sacrifice important detail. Redrawing and preparing illustrations, to make them suitable for photographic reproduction, will be charged to the contributor.

REFERENCES: References in the text, should be in the form of footnotes, numbered consecutively throughout the manuscript. Additional references for collateral reading should be assembled alphabetically by author at the end of the article. References should conform to the style of the Quarterly Cumulative Index Medicus. This requires in order; name of author, title of article, name of periodical or book, volume, page, month and year. For example: MORTON, DUDLEY J., *The Human Foot*, Columbia University Press, 1935. KRAUS, HANS, M.D., *Therapeutic Exercises in Rehabilitation*, Journal of Physical and Mental Rehabilitation, Vol. 3, pp 7-10, June, 1949.

Send all Manuscripts to the Editor, 1914 Poplar Avenue, Memphis, Tenn.

REPRINTS: Should be ordered when manuscript is submitted. They may be purchased at the following prices:

No. Pages	COPIES						
	100	200	300	400	500	1000	100 Add.
1	\$ 6.50	\$ 7.75	\$ 8.75	\$ 9.75	\$10.75	\$15.00	\$.75
2	9.25	10.50	11.75	13.00	14.25	19.75	1.00
3-4	11.75	13.50	15.25	17.00	18.50	26.00	1.50
5-8	22.50	25.75	29.00	32.25	35.50	48.75	3.00
9-10	25.50	30.50	35.50	40.50	45.50	65.00	4.00

An extra charge will be made for reprints ordered after manuscript has been published. Quotations will be furnished on request. Address inquiry to the Editor.

Subscriptions

SUBSCRIPTION RATES: Annual subscription rate is \$5.00, payable in advance. Association membership rates are: Active, \$10.00; Professional, \$5.00, and Associate, \$4.00. **SINGLE COPIES:** Single copy price is \$1.00.

REMITTANCES: All remittances should be made by check, money order, or draft. Never send cash except by registered letter. Make checks, money orders or drafts payable to the "Association for Physical and Mental Rehabilitation."

Inquiries and applications for subscriptions and all requests for change of address or membership should be addressed to—STANLEY H. WERTZ, SECRETARY, 1433 RAILTON ROAD, MEMPHIS, TENNESSEE.

Advertisers

ADVERTISING RATES: Full page \$65.00—½ page \$35.00—¼ page \$20.00—⅓ page \$14.00. Classified Directory listing for one year, (6 issues)—\$10.00.

ADVERTISING MANAGER: Dominic Cuda, 9251 W. Swann Circle, Milwaukee 16, Wis.

OFFICERS

HAROLD M. ROBINSON.....	PRESIDENT
2904 Farnsworth, Great Lakes, Ill.	
LOUIS F. MANTOVANO.....	PRESIDENT-ELECT
37 Clinton Ave., Rockville Center, L. I., N. Y.	
FRANK S. DEYOE.....	VICE PRESIDENT
89 Spruce St., Saxonville, Mass.	
LESLIE ROOT.....	VICE PRESIDENT
V.A. Center, Wood, Wisconsin	
ROBERT E. SHELTON.....	VICE PRESIDENT
University of Ill., Urbana, Ill.	
STANLEY H. WERTZ.....	SECRETARY
1433 Railton Road, Memphis, Tenn.	
ELEANOR B. STONE.....	TREASURER
2451 Webb Avenue, University Heights 65, N. Y.	

ADVISORY BOARD

THOMAS J. FLEMING, Secretary

ARTHUR S. ABRAMSON, M.D.....	Bronx, N. Y.
JOHN H. ALDES, M.D.....	Hollywood, Calif.
PEARCE BAILEY, M.D.....	Bethesda, Md.
WILLIAM BIERMAN, M.D.....	New York, N. Y.
DANIEL BLAIN, M.D.....	Washington, D. C.
JOHN E. DAVIS, Sc.D.....	Arlington, Va.
MILTON EISENHOWER, Ph.D.....	Collegeville, Pa.
EVERILL W. FOWLKS, M.D.....	Portland, Ore.
EDWARD D. GREENWOOD, M.D.....	Topeka, Kansas
RICHARD L. HARRIS, M.D.....	Montrose, N. Y.
FRANCES A. HELLENBRANDT, M.D.....	Chicago, Ill.
A. B. C. KNUDSON, M.D.....	Washington, D. C.
ROSS T. MCINTYRE, M.D.....	Washington, D. C.
KARL MENNINGER, M.D.....	Topeka, Kansas
DONALD MUNRO, M.D.....	Boston, Mass.
WINTHROP M. PHELPS, M.D.....	Baltimore, Md.
JACOB L. RUDD, M.D.....	Boston, Mass.
LEE G. SEWALL, M.D.....	Downey, Illinois
STAFFORD L. WARREN, M.D.....	Los Angeles, Calif.

COMMITTEES AND CHAIRMEN

STANDING COMMITTEES: Chairman and Coordinator: Louis Mantovano; **AMERICAN BOARD OF CERTIFICATION OF CORRECTIVE THERAPISTS:** Thomas J. Fleming; **CHAPTERS:** Arthur Landy; **CONFERENCE:** Earl Raymer; **CONSTITUTION:** Frank Deyoe; **LGAAL:** Lester Fahey; **LIAISON:** Mario F. Andriolo; **MEMBERSHIP:** Leslie Root; **NEWSLETTER:** Roger Wessel; **NOMINATION:** Laurence Heintzelman; **POSITION STANDARDS:** Thomas Zwerlein; **PUBLIC RELATIONS:** Reuben Margolin, Ed.D.

ADMINISTRATIVE COMMITTEES: Chairman and Coordinator: Leo Berner; **ANCILLARY AFFAIRS:** Phil Davis; **AWARDS:** George Devins; **CONFERENCE PROGRAMS:** Sam Boruchov; **EDUCATION:** Karl Klein; **EMBLEMS:** Lewis Scholl; **HISTORIAN:** Chris Kopf; **MEDICAL LIAISON:** Dr. Jacob Rudd; **PLACEMENT DIRECTOR:** William Zillmer; **PROFESSIONAL STANDARDS:** Kenneth Denning; **RESEARCH:** Dr. A. Ray Dawson and Dr. Edward Greenwood; **SURVEY:** Ray Robinson.

HOUSE OF DELEGATES

- Area #1—Frank DeYoe, 87 Elm St., Saxonville, Mass.
Charles Bader, VAH, Togus, Maine
Alfred Ellison, 89 Pin Cushion Ro., Framingham, Mass.
Robert Macaluso, VAH, Montrose, N. Y.
- Area #2—Arthur Landy, VAH, Chillicothe, Ohio
Chris Kopf, 2015 Birch St., Scotch Plains, N. J.
William Cully, 2613 Sunset Blvd., Broomall, Pa.
- Area #3—Walter Beasley, VA Center, Mountain Home, Tenn.
Paul Fleer, 111 East Mary St., Dublin, Ga.
Arnold Caldwell, VAH, Montgomery, Ala.
Paul Beck, VAH, Augusta, Ga.
- Area #4—Lester Fahey, 1315 Harmon Ave., Danville, Ill.
Leon Edman, VA Area Off., Ft. Snelling, St. Paul, Minn.
Raymond Kreick, 51 Keith Drive, Battle Creek, Mich.
- Area #5—Edgar Gay, VAH, Topeka, Kansas
Louis Scholl, VAH, North Little Rock, Ark.
Robert Swengel, 1312 Jackson St., Topeka, Kans.
Boyce J. Nail, VAH, Temple, Texas
- Area #6—Rudolph Jahn, VAH, Long Beach, Calif.
Richard Barr, 15136 Germaine St., San Fernando, Calif.
Charles Willhite, 4732 Canehill, Long Beach 8, Calif.
Walter Walkord, VAH, American Lake, Wash.

THE PROBLEM OF THE CATATONIC PATIENT*

HARVEY J. TOMPKINS, M.D.**

This panel is concerned with presenting a therapeutic technique applicable to the catatonic patient and developed by a Corrective Therapist, Paul Roland. It is often called the "Roland Technique." The presentation will be divided into three parts: an introduction consisting of general comments concerned with dementia precox or schizophrenia, particularly of the catatonic type. This will be followed by an exploration of the dynamics of catatonia. Mr. Roland will then give a clinical demonstration, after which we will welcome questions from the floor.

It may be necessary to clarify our terminology. In the official nomenclature, schizophrenia is synonymous with the term dementia precox. Bellak¹ attempts to separate dementia precox and schizophrenia on the basis of prognosis. Clinically, a history of pre-psychotic personality, insidious onset, and marked loss of affect, usually means a less favorable prognosis and, therefore, is classified by him as *dementia precox*. On the other hand, a record of a better integrated pre-psychotic personality with sudden onset, the presence of precipitating factors, and symptoms of confusion with affective features, indicates better possibilities of improvement and which he therefore calls *schizophrenia*. Today, the overwhelming proportion of clinicians apply the term *schizophrenia* in both instances. Historically it can be assumed that the clinical picture presented by schizophrenia has been known for many years. As early as 1849, John Conolly at Hanwell Asylum in England described what today we would call schizophrenia but did not give it a name. Morel in 1860 was the first to use the term *dementia precox*. Later, Hecker in 1871 used the term *hebephrenia*. Several years later, in 1874, Kalbaum described and used the term *catatonia*. In 1898, Kraepelin, undoubtedly influenced by Morel and Hecker, developed a descriptive classification of mental disease, including the various subclasses of dementia precox. All of these individuals believed that this disability was a clinical entity, occurred in adolescence, was physically caused, and had a hopeless prognosis. Kraepelin did admit the possibility of improvement. It was Bleuler who in 1911 coined the word *schizophrenia*, to indicate what is

commonly called the "split personality," signifying the disruption of the normal relatedness of thought, mood, and action, which occurs in this disorder. While he granted that schizophrenia was more prevalent in the teens, he also indicated that it did occur in other age groups. He did not believe that it resulted inevitably in deterioration. While he considered the probability of a basic organic etiology, he granted the possibility of psychogenic factors. Earlier Adolf Meyer had indicated that this disability was not a disease entity but a reaction resulting from progressive difficulty in adaptation leading to faulty habits and then to habit deterioration; his psychobiological concept.

Currently, schizophrenia is placed in the general category of disorders which are of psychogenic origin or for which there are no demonstrable physical causes or organic changes. In schizophrenia there is a "tendency to retreat from reality, emotional disharmony, unpredictable disturbances in stream of thought, regressive behavior, and, in some instances, a tendency to deterioration." The catatonic type of schizophrenia shows "conspicuous motor behavior, exhibiting either marked generalized inhibition (stupor, mutism, negativism, and waxy flexibility) or excessive motor activity and excitement. The individual may regress to a state of vegetation."² It should be remembered that the various classifications of schizophrenia, simple, hebephrenic, catatonic and paranoid, are rarely clearcut in a specific clinical study. The predominant symptomatology in an individual with schizophrenia will be the determining factor in classifying such patients into the various types.

The actual cause or causes of schizophrenia are not known. The probabilities are that, there are a number of etiological agents—genetic, constitutional, organic, and socio-psychological. In the absence of definite evidence of organic changes in this reaction, the clinical working hypotheses are principally in the psychogenic areas. Kallman believes that genetic and constitutional factors do operate in the development of schizophrenia. Evidence is cited to indicate that families with a history of schizophrenia do have a greater incidence than does the general population. However, the occurrence in these families does not follow the Mendelian Laws.

*Read at Opening Clinical Session of the Convention of the Association for Physical and Mental Rehabilitation, Washington, D. C., July 20, 1953.

**Chief, Psychiatry and Neurology Division, Veterans Administration, Washington 25, D. C.

¹Bellak, Leopold: *Dementia Praecox*. Grune and Stratton, New York, 1948.

²Committee on Nomenclature and Statistics, American Psychiatric Association, *Mental Disorders Diagnostic and Statistical Manual*, Mental Hospital Service, American Psychiatric Association, 1952.

It can be postulated that there is both social and hereditary transmission but conclusive findings are not yet available. Specific physical or neurological abnormalities have not been found in schizophrenia. Therefore, the diagnosis of this reaction is based on clinical and empirical impressions. Early recognition with diagnosis is sometimes most difficult. Advanced cases may be typical. It should be remembered that catatonic symptomatology may also be found in organic brain disease due to new growths and toxic and exhaustion states. Some pre-senile psychoses also demonstrate characteristics of catatonia. "This, however, does not mean that psychological mechanisms may not also be operative in such cases."³

Schizophrenics make up about 20 percent of all psychotics in public mental hospitals, with 15 percent carrying a catatonic diagnosis. Throughout the United States, there are about 20,000 hospitalized catatonic patients. In the Veterans Administration, the ratio of schizophrenics is much higher. In fact, 80 percent of hospitalized psychotics under VA care are schizophrenics. The difference is due to the much higher ratio of senile patients in state hospitals. On any one day, there are under VA hospital care more than 5,000 catatonic schizophrenics. They constitute 15 percent of all schizophrenics in residence. While the catatonic constitutes 5 percent of all VA hospital patients, 8 percent of these patients have been in the hospital more than ten years. This means that catatonics contribute almost 50 percent more than their share of long-term patients. In January 1952, a study was made of the hospital stay of all schizophrenics in VA hospitals. There is no reason to believe that this picture has changed since then. Of every 100 catatonics then in residence, it was found that:

- 12 had been there less than a year.
- 7 had been there more than 1 year but less than 2 years.
- 15 had been there more than 2 years but less than 5 years.
- 41 had been there from 5 to 10 years.
- 25 had been there more than 10 years.

100

There is no specific treatment for schizophrenia. In general, as in other illnesses, early treatment offers the better prognosis. Out patient treatment is possible in selected patients. Currently, approximately 20 percent of the individuals receiving outpatient care in VA Mental Hygiene Clinics carry a diagnosis of a functional psychosis, principally schizophrenia. A wide range of therapeutic techniques are available,

extending from psychotherapy, through drug and somatic therapy, to psychosurgery. The more drastic treatments such as shock, are used empirically. These therapies may be used either singly or in various combinations, usually the latter. Re-education and re-socialization are prime objectives. All activities of the hospital are geared to these ends.

Results of the various treatment modalities have not been properly evaluated, primarily due to the lack of standardization of diagnosis and of therapeutic results. This has long been recognized and, recently, the American Psychiatric Association and the National Institute of Mental Health have moved to investigate the possibilities of developing uniform diagnostic criteria and better methods of therapeutic evaluations. Available statistics in regard to improvement and recovery of schizophrenic patients, while imperfect, would indicate that more patients than ever before are improving under outpatient and hospital care and treatment. Nevertheless, as has been shown, there is still a large number of patients who remain hospitalized indefinitely. It is this type of patient, particularly those with strong catatonic features, who interested Paul Roland and for whom he developed his technique. Results following this method of treatment, particularly in his hands, have been good—even spectacular at times. According to a manual which describes his technique as a "Persuasion and Relaxation Therapy," the theoretical approach "is in accord with the conception that the schizophrenic process is a progressive mal-adaptation occasioned by frustration beyond the tolerance of the individual."⁴ This form of treatment is not to be considered a specific but a part of the total treatment of the patient and, to have lasting benefit, must be coordinated with the efforts of other therapies. Evidence of improvement in patients following the use of this technique has inspired others in the hospital to renew their interests in these difficult cases and more actively apply their particular contributions to the problem of the catatonic patient.

As in other therapies, there is need to better understand the rationale of this treatment, the reason or reasons for its effectiveness, and a more critical appraisal of the therapeutic results. Accordingly, the Veterans Administration has set up a Research and Training Unit at the VA Hospital, Downey, Illinois, to pursue these activities. There, Corrective Therapy will be subject to intensive scientific investigation; and, there, individuals will be trained in a technique which offers so much promise in the care and treatment of the psychiatric patient.

³Noyes, Arthur P.: *Modern Clinical Psychiatry*, Philadelphia and London, Third Edition, 1948, W. B. Saunders.

⁴Timm, Oreon K., et al: *Manual for Setting Up and Operating a Clinic for Persuasion and Relaxation Therapy*, VA Hospital, Danville, Illinois.

BEHIND THE CATATONIC DEFENSE*

RICHARD L. JENKINS, M.D.**

I wish that I could present to this group a solid framework of scientific knowledge of what lies behind the catatonic defense. I cannot, and will have to content myself with presenting what is frankly a working hypothesis.

Traditional religion and biological science seem to agree that man's present perplexity relates to his having achieved a power of choice and discrimination with respect to a wide range of possible courses of action. He evaluates these courses with varying degrees of certainty or perplexity, as good or evil, wise or foolish. While lower forms of life react in simpler and more predictable ways, and with relatively little that we can identify as indecision, man has expanded the size of his skull, the complexity of his brain, and the extent of his understanding. The increasing sweep of his knowledge has given him an extensive mastery of his outer world but faces him with vast new opportunities for confusion in the complicated decisions he must make, and the enormous and increasing complexity of his inner world.

Dr. John Whitehorn has stated that as the stomach is the organ of indigestion, so the brain is the organ of maladjustment. The improvement shown by many severely disordered schizophrenics following the massive destruction of the operation of prefrontal lobotomy underlines this observation.

Social relationships have increased in complexity and probably the most widespread and urgent problem met by the growing child, is the problem of reconciling the inner demands of individuality on the one hand with the need for the approval and acceptance of others. Social living forces upon us role-playing, and prescribed forms of behavior which makes us all, to some degree, "actors" in our daily actions. Social living demands a certain amount of concealment of the self as well as a certain revealing of the self. Some concealment has social sanction as the Right of Privacy or Its None of Your Damn Business. Or at least such a right used to be recognized.

Each of us wants to do as he pleases, and each of us wants the approval of others. We resolve this paradox by building into our personalities, desires and ways of behaving which are acceptable to others. To some degree, we really become socialized. If, particularly, in early life our relations with others

are warm and satisfying, if our own emotional needs are met by our parents, then it is easy for us to want happiness for others, and the process of socialization proceeds rather easily. We achieve this because we find satisfactions in our contacts with others which make it not too difficult to mold ourselves according to some more-or-less acceptable social pattern. With varying degrees of success, we delete or repress desires which we learn are unacceptable. And most of us succeed in attaining a more-or-less comfortable existence, an imperfect but workable integration of inner impulses with the expectations of society, an integration adequate to the extent that we are not usually in any intense conflict over opposing tendencies within ourselves.

We remain actors however. We play roles. We conceal what society demands that we conceal, and what we think it wise to conceal, and we reveal ourselves selectively. The balance between what is concealed and what is revealed is socially important. When the ratio of concealment to revealment is too low, the individual is Common, Crude and Uncultured unless he succeeds in making the grade as an ascetic Saint or Mahatma. Such achievement requires so living that he has nothing more than a few body functions which can be considered deserving of concealment, and he must also exercise effective moral and spiritual leadership, to avoid being classified as just plain Uninteresting or a Bore. When the ratio of concealment to revealment is conspicuously and protectively high we say that the individual has a Poker Face or a Dead Pan, plays them Close to the Chest, and we call him Close-mouthed or Defensive or Suspicious or perhaps just plain Worried. If he overdoes the role-taking to conceal his true self, we call him a Poseur or a Hypocrite. He lives constantly under a sword of Damocles, The Danger of Being Found Out. Even if he feels justified in his concealment he lives to some extent in the shadow of fear, as does a scout in hostile territory. This may be well tolerated if the danger is slight, or even if the danger is great if the cause is conceived to be noble. To the extent he feels unjustified in his concealment or in what he is concealing, he lives in anxiety as well as in the shadow of fear. For those who are not Saints, or Mahatmas, who are not Crude and Uncultured, and who would prefer not to be just Uninteresting, a constant problem of living is how much to conceal and how much to venture which is worthy of concealment. Too much venture creates anxiety. Too little contributes to the risk of ennui and boredom.

Short, perhaps, of being Crude and Uncultured

*Read at Opening Clinical Session of the Convention of the Association For Physical and Mental Rehabilitation, Washington, D.C. July 20, 1953.

**Chief, Research Section Veterans Administration, Central Office, Washington 25, D.C.

there are those personalities which are open and perhaps naive, but with easy outward expression. And short of the Suspicious, the Poseurs or the Hypocrites, there are those who are anxiously and self-consciously guarded and uneasy in their relations with others. And among them we see a disproportionate amount of mental illness develop.

For most of us the positive social rewards of warmth and sharing outweigh the negative aspects of social exchange, the criticism, the disparagement, the derision. My awareness of differing attitudes toward verbal exchange was stimulated by the remark of an inmate of a prison concerning a certain supervisor. "He's a good man to work with. Why you can work with him all day and he'll never say a word to you." In certain situations verbal exchange is usually hostile or limiting. There are those who expect verbal exchange to be hostile not because of the situation, but because of their own make-up. There are those whose life is dominated by the fear of derision which Abraham Myerson called the derision complex. And there are those who have never experienced warmth and sharing to a degree which makes social exchange worth the risk it carries. Such persons have not found the compensations of the active and inner experience of real social acceptance and interpersonal sharing to make up for the denial of primitive individuality which adjustment to society demands. It is not typically that such persons have been mistreated. It is rather that they have not had a degree of the happy experience of becoming one with a group or partner, of real human sharing, which makes holding a place in a world of people an important objective. Sometimes such a person has been to his parents primarily a possession or a responsibility, rather than a personality who should grow to independent maturity under their care.

Healthy adaptation is the maintenance of a balance and continuity in the personality by adjustment to others and the outside environment. In addition to this kind of adaptation we can recognize another which is preserving the continuity of the inner mental state by a protective detachment from the outer world, of not permitting the stimuli of this world to intrude. This kind of adaptation is widely used as a religious practice in prayer or in contemplation particularly in India. In a minor way we all use it in concentrating our attention for the solution of a problem which requires all our resources.

We see the same kind of detachment in a morbid form in schizophrenia. Schizophrenic withdrawal is a detachment of interest and attention from the outer world, particularly from the social world. The patient who shows schizophrenic detachment may respond to

words, but he does so at either the primitive level of their literal meaning or in terms of their private meaning for him. He has no human interest in the speaker, and exerts no effort to read or understand him as a person. Human interplay is lost or actively avoided. A part of this may be because human relations have commonly been so disturbing to the inner equilibrium of the patient they are consistently avoided. This is what we see in the autistic child who withdraws from human contact. And a part may be because the patient is preoccupied in struggling with a problem which he cannot solve. This is the case with schizophrenic preoccupation. Yet the former is probably also a factor in schizophrenia.

A study by Joseph Mark of our hospital in the Bronx involved submitting 139 statements to 100 mothers of male schizophrenics and 100 mothers of male non-schizophrenics. In fifteen instances the mothers of schizophrenics agreed with the statement more frequently than the mothers of non-schizophrenics with the difference at the .001 level of probability. I would ask that you listen to these statements as I read them and try to form in your mind's eye a picture of the kind of maternal attitude which would lie behind them:

Children should be taken to and from school until the age of eight just to make sure there are no accidents.

A mother should make it her business to know everything her children are thinking.

If children are quiet for a little while mother should immediately find out what they are thinking about.

Children should not annoy parents with their unimportant problems.

A devoted mother has no time for social life.

A watchful mother can keep her child out of all accidents.

Playing to much with a child will spoil him.

A parent must never make mistakes in front of the child.

Parents should sacrifice everything for their children.

When the father punishes a child for no good reason the mother should take the child's side.

A mother has to suffer much and say little.

Most children are toilet trained by 15 months of age.

Children who take part in sex play become sex criminals when they grow up.

A child should not plan to enter any occupation that his parents don't approve of.

Too much affection will make a child a "softie."

I believe you will agree with me that the mental picture these statements provoke does not suggest a

mother-child relationship involving warm affection for the child, as distinguished from a sense of responsibility and duty, or much capacity to respect the child as a separate personality with a right to his own privacy, individuality and desires.

I should not labor this point for I do not feel that child-parent relations determine schizophrenia, and there is a wide gap between typical *differences* of attitude of mothers of schizophrenics as contrasted with mothers of non-schizophrenics and typical *attitudes* of mothers of schizophrenics. We do not know, furthermore, how far these attitudes may be a result, rather than a cause, of the schizophrenic breakdown in the son. Yet we would be ignoring strong implications if we did not recognize here indication that the lack of an emotionally satisfying child-parent relationship appears to be an important factor predisposing toward a schizophrenic breakdown. Furthermore the element which is likely to be unsatisfying is not overt maternal rejection such as typically we see in the background of the unsocialized aggressive child who in extreme cases becomes the amoral psychopath, nor is it the insecure anxiety-ridden clinging to parental standards in the hope of retaining parental love and approval which typically is characteristic of the overconforming personality predisposed to psychoneurotic breakdown. Rather it is the background of the child who has learned by experience that the price of real emotional contact with the mother is the surrender of his individuality, and that even such surrender does not result in affection or in his acceptance as a person in his own right. His initial interpretation of the gentlest human approach is likely to be that it is an invitation to the surrender of individuality. And, thank you, he isn't having any.

Persons who grow up with parents who do not treat them as personalities in their own right are not easily socialized. They want and yet they fear contact with others. Their experience has been that if they begin to develop close relations with others, they do not find their feelings and desires are respected, but rather that these others seek to control their behavior or even how they think and feel. Better be lonely and oneself than to lose one's individuality. The young person may turn away from others in that reaction we call schizoid withdrawal, or may timidly and halfheartedly approach them but with strong feelings of ambivalence.

The problem understandably becomes acute most often in relation to the sexual impulses and to the intense emotionally-charged relationship of sexual love. Here is an intense drive toward behavior which normally involves an emotional sharing of the most intense and intimate sort, a sharing which normally can create an emotional vulnerability of the most

extreme kind. The sensitive individual who has not learned to manage with some degree of skill the minor social exchanges of daily living is highly vulnerable when his or her hunger for companionship begins to be reinforced by the sexual impulse or when his protective self-isolation is reinforced by its defensive derivatives. I recall an unsophisticated young woman, not well integrated in life, who joined the Womens Army Corps. Though not unattractive, she had never been on a date. After basic training, she had three successive dates with three different soldiers. She was forcibly kissed on each occasion and went into the hospital in a schizophrenic psychosis. The demands placed upon her were too abrupt and forceful for her to accept or to manage, and as a consequence, the price of personal approval was too high. The ensuing conflict disorganized her.

What we have been discussing are largely background factors. The schizophrenic psychosis itself appears to be the result of an acute conflict the patient is not able to resolve. This conflict may take a variety of forms but conflicting elements which begin as desire to assert individuality and desire for the approval of others are likely to be central. When the social standards for approval have been internalized, then we have guilt conflict.

There are many indications that schizophrenia is the expression of an insupportable and disorganizing frustration resulting from an inner conflict the patient is unable to solve. The acute and insoluble conflict commonly results in an anxious preoccupation.

It would appear likely that in the acute schizophrenic process the higher circuits of the brain are so jammed with such fruitless unresolving neural activity relating to the schizophrenic conflict that the day-to-day activity is left largely to lower centers with potentialities for only more stereotyped, rigid and defensive adjustments. Viewed in this light, the treatment measures used with schizophrenics should be classifiable as:

- (1) Those which seek to check the reverberating neural activity of the schizophrenic conflict. An example is prefrontal lobotomy and

- (2) Those which seek to draw the higher centers into the service of the day-to-day adjustment. These involve stimulating goal-directed activity. An example is the work of Dr. Henry Peters of VA Hospital, North Little Rock, using graduated problem-solving for food to assuage hunger created by sub-shock insulin.

We have all experienced conflicts which preoccupied us, and diminished our capacity to adapt to the demands of daily living. The difference between ourselves at such times and schizophrenic patients is

probably one of degree and of our success either in solving the problem or in putting it aside.

Within the schizophrenic diagnosis we recognize several types. The patients we call catatonic give every indication of being in active conflict. There is a high level of tension evident either in activity or in rigidity. The patient is either seeking to protect himself by withdrawal and resistive isolation, a syndrome we call catatonic withdrawal, or he is in a state of acute and frank mental disorganization we call catatonic excitement.

It is the patient who shows catatonic withdrawal with whom we are particularly concerned in this meeting. This patient sits or stands immobile in an attitude of aversion or withdrawal. His muscles are tense and fixed, his face turned down or averted, his shoulders hunched. Saliva may collect in his mouth until he drools or it is suddenly ejected. He does not answer what are euphemistically known as the calls of nature, and unless he is prompted or taken to the toilet he is likely not to empty bladder or bowel until overdistention renders this automatic. He is uncommunicative or mute. The whole picture is one of a tense protective withdrawal—a withdrawal which from time to time may be punctuated by sudden violent explosive action often assaultive in character.

In working with patients in catatonic withdrawal,

Mr. Roland has demonstrated more systematically I believe than has been done before, that an approach which embodies gentle, patient, persistent, and consistent effort toward diminishing muscular tension and establishing confidence in the inter-personal relationship, results in a gradual development of human response and a gradual freeing, for adaptive behavior, of the frozen personal resources. Infinite patience is required, and progress is very slow at best. Successful performance of this work calls for a temperament which can find in slowly-appearing returns a justification for a continued major output of effort. Even when returns become evident in the therapy itself, it is likely to be long before they are reflected on the ward or in other portions of the patient's daily routine.

This method of treatment seems clearly to fall into the group which seeks to call the higher centers into the service of the day-to-day adjustment.

I am happy that Mr. Roland's work at Downey is within an experimental design which will make it possible to evaluate the result of his method more objectively. However his repeated and relatively consistent success is getting increasing verbal and human response from patients who have been mute for years has demonstrated beyond question that he has a contribution to the treatment of schizophrenic patients.

REPRINTS AVAILABLE

The reprints listed below are now available. Prices are based on number of pages. 1 p.—.10; 2-4 pp.—.15; 5-10 pp.—.25. These prices include mailing cost, except for quantity lots.

Corrective Therapy in the Surgical Knee—Thomas S. Robertson, M.D., and John M. Hawk, 6:1 Sept. '5215
The Total Approach in Educating our Physically Handicapped Youth—J. L. Rudd, M.D., 6:1, Sept. '5215
General Principles of Exercise Therapy—Alfred Ebel, M.D., and Arthur S. Abramson, M.D., 5:4, Mar. '5215
Factors Related to Training of Upper Extremity Amputees—Norman Berger, M.S., and Marshall A. Graham, B.S., 5:3, Jan. '5215
Remedial Exercises and Rehabilitation in Back Injuries—Marcus J. Stewart, M.D., 4:8, April, '52....	.25
Prevention of Low Back Pain—Hans Kraus, M.D., 6:1, Sept. '5215
The Hack Self-Reliant Walker: An Improved and Tested Aid in Ambulation—George V. Devins, B.A., and Roy H. Nyquist, M.D., 6:5, Nov. '52....	.15

Subject-Author Index, 5:6, July '52.....	.25
A Guide for the Corrective Therapist in the Treatment of Patients with Lower Extremity Amputations—Paul F. Fleer, M.Ed., 5:6, July '52.....	.25
A Conditioning Program for Sedentary Men—Lawrence E. Morehouse, Ph.D., 7:2, pp., April, '53....	.25
The Role of Neurosurgery in Rehabilitation of the Paraplegic Patient—C. D. Scheibert, M.D., 7:3, May '5315
A Practical Approach to the Treatment of Brachial Birth Palsy—Franziska Schweitzer, 7:3, May '53....	.25
Preliminary Survey and Analysis of the Educational and Professional Background of the Corrective Therapist—Louis F. Mantovano, 7:2, March, '53..	.15
Rehabilitation Potentials in Spinal Cord and Cauda Equina Injuries—Louis B. Newman, M.E., M.D., 7:3, May '53.....	.15
Factors Related to the Restoration of Language Function in Aphasic Patients—Jon Eisonson, Ph.D., and Robert C. Morrow, Ph.D., 7:3, May '53.....	.15

THE APPLICATION OF ACTIVITY THERAPY TECHNIQUES FOR THE CHRONIC, REGRESSED, PSYCHOTIC PATIENTS*

FRANCIS M. MARUSAK**

At Perry Point tomorrow, a Corrective Therapist will spend approximately three hours throwing and catching a ball with individual patients.

Many times the question is asked what therapeutic value does this ball playing have? At the very outset I wish to make this point clear. The activity is of secondary importance. The relationship built and strengthened through this activity is of major therapeutic value. This I think shall clear some of the confusion, which undoubtedly is caused by the title. It has been my impression that too much stress has been placed on activity, and far too little on relationships. The activity is but a means of allowing the patient to gain satisfaction for his present state of adaptive behavior. He can relate to other people through objects easier than through speech.

Now, let us become specific. Doctors Dreyfus and Waites have clarified the problem and explained the dynamics of the situation. At this time I shall attempt to describe one method of meeting these problems and dealing with them in an effective, therapeutic manner. I would like to briefly give treatment examples of a catatonic, paranoid, and hebephrenic reactions. The patients described represented, on the whole, the average treatment problem.

This 41 year old, single, colored male was first admitted to a mental hospital in 1940. The period of hospitalization lasted six months. He was discharged CDD from the Army on June 10, 1943, after eight months of service. He has been continually hospitalized since April 12, 1946 at Gallinger, St. Elizabeths and the Veterans Administration Center, Martinsburg, West Virginia. At Martinsburg he received electric shock and insulin shock therapy. He showed little or no improvement and on August 20, 1948, he was transferred to Veterans Administration Hospital, Perry Point, Maryland. Ward physician's note of August 23, 1948, states: "He shows thought blocking, echolalia, and waxy flexibility, which is prominent. It is impossible to get him to eat." On November 7, 1950 the physician wrote, in part: "He has constituted a severe management problem. We have reached an impasse. EST does not seem to be helping the situation any further." He was later

placed on maintenance EST, which is one treatment weekly. Under this routine he returned to the typical catatonic stupor and was passively cooperative in eating. To summarize, he had repeated attempts at psychotherapy, EST and IST at a previous hospital and 40 EST treatments at Perry Point. It was necessary to carry this patient to the dining room and any clinic it was required for him to attend. At present this patient is on full ground privileges, is working in the semi-industrial ceramic project, and on week ends spends his free time growing flowers in his own garden plot. He is also engaged in psychotherapy. What did effect this change? The first factor seems to be the partial gratifying of the considerable need for love. This is probably the uppermost problem in the early stages of therapy. How was this need met? The patient was greeted by the therapist each time he entered the ward from the time he was prescribed for treatment on January 2, 1951. He was taken to the clinic at his regularly scheduled time. Though he did not participate in any type of activity, he was allowed to stand or sit, and observe. The therapist would frequently stand near him, sometimes silently, other times carrying on a monologue concerning general subjects. Each time he passed the patient he would give some sort of friendly greeting. After six weeks of this approach, the patient was willing to take a ball and hold it. After two weeks of holding the ball, and repeated attempts to engage him in activity, the patient began to verbalize more freely. By this I mean he did not speak only in monosyllables. When attempts were made to have him participate in passing and catching the ball his reply was "I don't want to hurt anybody." "Somebody will get hurt if I throw it." The patient was constantly reassured by the therapist that he would personally see to it that no one would get hurt, and that the therapist would remain near him to guard against anybody being hurt. After three months of this type of behavior, he agreed to hand the ball to the therapist. There was one condition. The therapist was required to sit opposite him. While this activity was in progress he continued to make repeated requests for reassurance that nobody was getting hurt. These bids were made each time he handed the ball. Then the tempo of activity picked up. In two weeks he consented to roll the ball to the therapist. However, the feet of the therapist had to touch his. Here the patient demonstrated his need for closeness, someone

*Read at the Scientific and Clinical Session, of the Association for Physical and Mental Rehabilitation, Washington 25, D.C. July 23, 1953.

**Chief, Corrective Therapy, Veterans Administration Hospital, Perry Point, Maryland.

needed to be near him physically and assure him that he was really liked. After one week of this activity the patient agreed to roll the ball further. During the next week the patient began to throw and catch the ball if it were thrown to him. In another week the patient would crouch and catch and throw the ball. One day of this activity was sufficient to have him move to an upright or standing position to participate. He needed constant reassurances that nobody was being hurt. He began to display ease in activity. The tenseness was diminishing, the movements were not so mechanical as previously and he was showing some spontaneity. This change was not only noted in his motor responses, but also in his verbalization. He began assisting in housekeeping details on the ward. He increased the scope of his activities to those which were more demanding. He engaged in activities which offered an outlet for his aggression and hostility. These activities were use of light and heavy striking bags. Again the patient made continuous requests for reassurance that nobody would get hurt. This request was made each time he struck the bag. The therapist would stand near him and give reassurance every time the bag was hit. After several weeks of this he began to hit the bag in the manner that it is more acceptable, that is, there were not requests for reassurances made after each blow was struck and the activity became continuous. In July 1951 he was discontinued from EST. He was picked up for psychotherapy in August 1951. This was of a supportive nature. He was prescribed for Occupational Therapy in September 1951. Psychotherapy was carried on with his corrective therapy and occupational therapy regularly to May 1952. At this time his therapist was transferred and he received intermittent psychotherapy through November 1952, when he was again placed on regular therapy sessions. He has been discontinued from corrective therapy activities since March 1953.

Here we see how, through the attitude of the therapist, this partial non-verbal approach was used. There was no feeling of frustration shown when the patient did not respond readily. The therapist took a secondary role in the situation, avoiding any conflicts of who was master of it. A constant, active, non-intrusive approach was taken, to avoid overwhelming the fragmentary ego that had survived this long illness. This prevented the patient from misinterpreting the approach of the therapist as somebody who would use him. As Dr. Dreyfus pointed out, such a patient thinks that what he gives others is going to destroy them. He frequently tested the therapist. This was done by seeking reassurance. He would ask when the therapist would be back; would he positively see him. When each promise was kept, he realized that he had a meaning for the therapist,

and the therapist had a meaning for him. His need for love was being met. When he engaged in acting out activities, he found encouragement and acceptance for expressing his hostile and aggressive feelings in a socially acceptable manner.

Now, let us move to a paranoid reaction. The patient is a 39 year old, single, male veteran. He was discharged CDD from the Army on December 1, 1944, after two years and three months of service. He was admitted to Perry Point Veterans Administration Hospital on March 10, 1945, as a transfer from Gallinger Hospital. He had been hospitalized there since February 7, 1945. The ward physician's note of March 1, 1948, contained these statements: "After admission here, Perry Point, he was assaultive, combative, and showed an explosive, unpredictable hostility. Throughout hospitalization he has been a serious problem both to personnel and other patients. He has injured many of both. On one occasion he fractured another patient's skull. He has been treated twice with ambulatory insulin, and electric shock therapy, with little or no sustained improvement. He is being considered for lobotomy because of his chronicity, lack of improvement and violent anti-social behavior." This patient had required a great deal of restraint, seclusion, and sedative measures, both drug and physical. A prefrontal lobotomy was performed in May 1948. On March 24, 1949, a second prefrontal lobotomy was performed. Portions of physician's note of September 21, 1949, states: "There has been no improvement since second lobotomy operation. Continues to spend most of his time in seclusion status. EST works fairly well as a sedative. Patient constitutes a problem of therapy and management, that there seems very little solution for." He began treatments in corrective therapy January 2, 1951. In February 1951 it was necessary to discontinue EST due to patient developing spontaneous seizures. He remained in seclusion.

This patient has been out of seclusion continuously since March 13, 1952. He has been on limited privileges since October 11, 1952, and has been attending occupational therapy since that date. Manual arts therapy was added April 14, 1952. Before we progress any further I would like to quote the physician's note of May 26, 1952: "He has remained out of seclusion in recent months and on the whole has been doing better. There are times when the situation seems precarious and we may have to put him back in seclusion. However he has managed the situation. He seems to have a satisfactory relationship with me and seems to be able to tell me about things when he is upset."

Here we have seen regression to a primitive state and almost animal-like behavior. The most illuminating aspect of this is that at no time did he engage in

big muscle activity. When he did consent to engage in this type of activity it was late in therapy. Even then his participation was sporadic and with little enthusiasm. Though the early stages of therapy he made frequent, almost constant bids for attention, and also for objects that could be termed as gratifying oral needs, such as cigarettes, chewing gum, candy, etc. He would participate only in simple response type activity, those activities which called for a minimum amount of expended energy. This was also limited to participation with the therapist.

When he became upset during the course of treatment session, he would be removed from the treatment area and allowed to rage. To clarify this statement, the patient was not returned to his room or for sedation. He was allowed to verbalize by hollering, etc., and at the same time the therapist would talk to him, explaining that he understood that the patient didn't like acting this way but that he could not remain in the group when he did feel this way. No censure or retaliation was used by the therapist or allowed to be precipitated by other patients. He could not feel that he was being understood. When it was felt that the relationship was strong enough, the patient was informed that to gain all the attention he demanded it would be necessary for him to earn it. To accomplish it he needed to participate in activities which demanded social interaction with other patients. Here, from a controlled situation with the therapist, he went in to semi-controlled situation with especially selected patients. He performed reluctantly at first. When he began to realize that he was given recognition by the therapist for his achievement, and was being accepted by other patients, his attitude toward the situation changed completely.

When situations arose that might prove too demanding of his feeble adjustment, and it was impossible to allay the anxiety with the therapist's help, he was withdrawn from the situation. Here the patient was placed in a neutral environment when he reached his social tolerance. Another aspect we might consider is the authoritarian figure protecting him. As soon as his personality recovered, he was placed in other social activities which were less demanding. He was offered encouragement to participate in other social situations at all times. Liberal rewards were given for his achievements, in the form of praise. Since October 1952 he has been carried on a schedule of supportive psychotherapy along with his adjunctive therapy routines. These sessions started three times weekly, and were progressively reduced or increased as the need arose. He can now master these aggressive situations by talking them over rather than acting them out.

We have found in our description of dynamics that

there is very little difference between the hebephrenic and paranoid reactions. Let us now discuss a hebephrenic patient. This type of reaction is considered the one with the poorest prognosis. The patient is a 35 year old, single, male veteran, who was first hospitalized while in the Army in May 1944. He was discharged CDD from the Army directly to Veterans Administration Hospital, Perry Point, in July 1944. A trial visit was granted September 16, 1944. He was admitted to Canandaigua Veterans Administration Hospital on December 8, 1944, and on March 30, 1945 he was readmitted to Perry Point as a transfer from Canandaigua. Since that time he has been a confirmed eloper; has been involved in many unprovoked assaults, is over-talkative, overactive and manneristic. Behavior has been child-like, thinking has been preoccupied with obscenities and vulgarity. Treatment has included several attempts at psychotherapy, a great deal of drug and hydrotherapy sedation, two series of EST, insulin shock therapy, with 35 comas, and a lobotomy which was performed October 21, 1948. On December 22, 1950, the ward physician wrote as follows: "This patient, who is a post lobotomy, has been on Ward 24, the disturbed ward, for many months. Periodically he assaults other patients without any apparent provocation. At other times he makes a satisfactory ward adjustment. He is totally unpredictable, and after an assaultive episode he will not disclose any reason for his actions. His manner is one of facetiousness. He has been in and out of seclusion many times. He becomes involved in assaults on other patients about as frequently as anyone on the ward." Patient was assigned to corrective therapy on January 2, 1951.

This patient, when first assigned, was the opposite of the other two described. He did not want to be near anyone. He would participate in activities, but a maximum distance needed to be maintained. When approached by the therapist he would actually run to the opposite corner of the room. The only real changes in this patient's illness have been these. Prior to assignment of corrective therapy he participated in no type of hospital activity. He is now attending the full recreational program of spectator events. This he was able to accomplish in six months of treatment. He has made no elopement attempts since assigned to corrective therapy. He has not necessitated seclusion during this time. He does not require, nor has he required, any drug sedation for many months. His needs for sedative hydrotherapy measures are very rare. For the most part when they are given, it is at his request. Previously he showed no interest in housekeeping details: he now assists in these tasks. Where previously he acted out his hostility, he now verbalizes it. His social participation has increased to the point where he assists other

patients. He verbalizes his underlying problem without any of the typical hebephrenic behavior. He tells the therapist he doesn't understand why his mother did not like him; he has always been a good boy; she always favored his elder brother; his father was a swell guy, but he died. This patient has taught me one important aspect of the schizophrenic sense of values. He does not judge another person so much for the manner in which he treats the patient. He evaluates the manner in which you handle all the patients in the various situations which arise from day to day. Since June 1, 1953, this patient has been engaging in occupational therapy activities.

The problems of administering treatment to this patient group are many and varied. The greatest stumbling block, I find, at all levels of therapy, is the term "cooperativeness." I prefer to use this loosely. How it found its way into modern psychiatric terminology I cannot discover. Cooperativeness can be defined, I am told, as that point in therapy when the patient agrees with you and answers or responds in the affirmative to your questions or requests. Who is supposed to be cooperative? The patient or the therapist? Who is sick? This may not be a fair question for it may raise some doubts. Let us take the case of the catatonic. Here in the early stages of treatment we found the conflict of dependence and independence. At this point the patient is capable of neither loving us nor of hating us. We must then accept the reality situation. It may take months, and usually does, for him to distinguish us from other sundry matter in his milieu. Had the accent been placed on activity, he obviously would have been classed as uncooperative. This, then, would lead to a struggle, not physical, but psychological, as to who controls the situation. Here, then, we must do something that is contrary to our culture. We must set aside our need for rapid achievement and accept the secondary role in the situation. If we have any hopes of ever attaining our treatment aim, this is a must.

We have discussed at great length the original contact. Now what happens after the patient is really in our care? We often find the patient drools; his nose may run continuously; he may have no control over his excretory functions; he may be slovenly in his dress; or he may have all of these in one package. Many times the initial reaction is one of disgust. It is difficult to visualize this type of individual as a human being. However, he is human; he is sick. He is an adult who seeks gratification at infantile and primitive levels. Many have been successful in life prior to their illness. Therefore one must keep in mind that it is necessary to help the patient maintain some sort of self-esteem in reality situations. You will have to assist this patient in controlling these habits.

This may cause some anxiety in us. Here we are dealing with infantile processes. They may awaken our own infantile anxieties. These situations must be understood if we are to cope with them in an effective manner. It is necessary for us to learn to understand the situation we are placed in by meeting this type of patient, that we see the situation as the patient does, ourselves included. It is necessary that we understand what this patient, through his behavior, is communicating to us. If you accomplish this understanding you have begun a relationship. It must be kept in mind at all times that the patient did not come to you for treatment. You invaded his world of distorted reality, and, regardless of how you look at it, you are threatening him with a situation he has spent years building up a protective shell against.

We have talked a great deal about relationships. What is a good relationship? What do we do with it? If the relationship can not be utilized for social growth, it is of no therapeutic value. One often hears this phrase used, when somebody else cannot pick the patient up for more advanced therapy? "I can't understand it. He does anything I ask him or tell him to do." If we study the situation thoroughly we find the patient was probably seduced into the relationship. This was caused by the therapist's own dependent needs. We would probably also find that this patient was not allowed or even assisted to work through any minor anxiety causing situations. When a patient is helped to move on to further steps in the course of therapy, he will show some minor signs of anxiety, with which he may be helped. A non-verbal approach to this could be handled by standing near him and demonstrating a solution. Another approach could be a non-technical terminology explanation of the entire situation and how to overcome it. Another aspect of preparing the patient for other relationships can be accomplished by using other patients. This is done by effecting activities of varying degrees of social interaction, and affording the patient a means of age gratification, which will elevate or reinforce his self-esteem.

I do not hesitate to say this is a most difficult task to accomplish. However, it is not insurmountable. This type of patient has spent a long time building and perfecting this barrier against reality. To get through this barrier is an art, and I might add, a fine art. However, in reaching this patient one must guard against committing the same errors the parents, or parent substitutes, have made previously. Protectiveness, submissiveness, and permissiveness can all be effective therapeutic agents. It must be remembered, though, that it is a double-edged sword you are using.

Now, I am not naive enough to say the few things I mentioned will meet all the problems posed by all

patients. There is that certain group which will refuse to enter into reality testing. For this group an attitude of steady pressure, along with firmness, is needed in our effort to engage the ego at its fullest capacity. This is necessary for adequate therapy. We have given tacit approval to his psychotic behavior. Now we must move him along. His ego is able to handle it. We are therefore exerting steady pressure in inciting progress to higher levels of achievement. Here again I wish to make a point clear. We should never use this attitude unless we have cleared it by mutual consultation with the prescribing physicians. It should also be kept in mind that the activity not be outside the capabilities of the ego at its present state.


In conclusion I wish to make it clearly understood that it is not my intent to infer that corrective therapy activities are the total answer to the problems of this patient group. I merely wish to point out one method in which I have found it fairly successful. When the patient can perform other activities which are more demanding, he should be dropped from the section initiating the treatment. This type of patient can best be treated in phases. The schizophrenic measures progress in new achievements. This type of patient differs from the acutely ill schizophrenic in that he measures his progress in terms of different ward setting, increased privileges, etc. Another method involves constant encouraging of patients to verbalize. This may assist him in later engaging in psychotherapy. This may be of a supportive nature, but

it is none the less important if any real success is to be obtained.

The therapy situation must be kept flexible. If the ego is to be engaged at its fullest capacity at all times, it may be necessary for you to treat this patient as many as six or seven hours daily. The treatment situation at this phase needs to be constructed to the day-to-day response of the patient to his milieu. Consistency is also important in the treatment situation, consistent not only in your day-to-day presence, but in your attitude, manner, expressions and rewards. It is the essence of good therapy. The program must be dynamically oriented. If it is not then the term therapy is a hollow useless gesture. The program should be built around cooperation, not competition.

We can now see that our program is based on the same basic, fundamental principles of good psychotherapy, only carried on at a non-verbal level. The non-verbal approach is the indicated initial contact for this patient group. It is not a difficult approach to master. We have all gone through it in early childhood. If we observe children engaged in social interaction at infantile levels, we find actions and expressions speak for them.

In therapy we are dealing primarily with the ego. We can therefore postulate that one method of reaching through the ego boundary is the social interaction established through activity. This affords the therapist an opportunity to offer the patient satisfaction for behavior other than his psychotic pattern. One can then satisfy his needs by gestures, expressions, and a general feeling of empathy.



Holiday Greetings



"Peace On Earth and Good Will To Men"



HAND DYNAMOMETER "GUARD"

RUDOLPH JAHN, B.S.*

INTRODUCTION:

In testing the strength of the abnormal hand with the Hand Dynamometer, interference is encountered from the inability of the patient to properly position the hand and the fingers. This interference occurs with patients who have excessive spasticity, such as is found in hemiplegia or with patients who have flaccidity because of peripheral nerve injury.

Inaccurate measurements also are obtained when excessive flexion contractures are present due to prolonged immobilization in cases of cervical cord injuries resulting in paralysis per se.

In testing the normal hand the fingers often interrupt the action of the dial indicator. To eliminate these difficulties the writer has tried turning the dial of the dynamometer toward the palm. This approach does not eliminate the interference if the contour of the hand causes a pressure against the indicator, or if the hand is so small that the palm flattens against the face of the dynamometer. The above mentioned conditions indicate sources of interference which occur when one is testing the grip strength of either the normal or impaired hand.

Since the Hand Dynamometer is used extensively in Corrective Therapy, it is essential that valid readings of gains and losses in grip strength be taken at regular intervals. Such measurements must be accurate to determine progress as well as to aid in evaluating the patient's status for further treatment.

To increase therapeutic efficiency and validity of measurement, a "plastic guard" over the face of the Hand Dynamometer has been developed and used. When this guard fits properly, recordings are found to be more accurate and the follow-up treatment more closely correlated with that prescribed by the physiatrist.

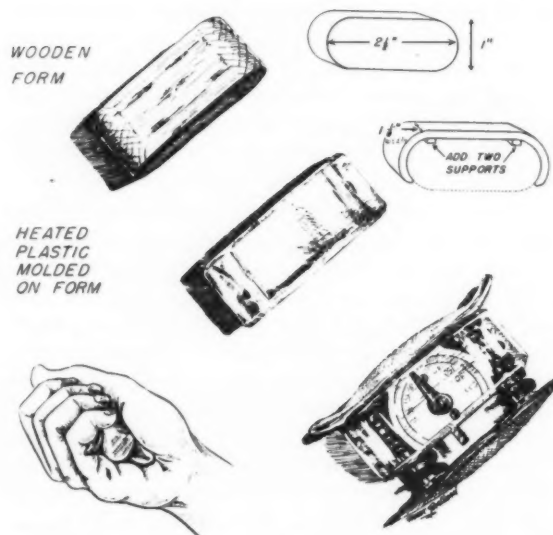
SUMMARY

The clinical advantages of an improvised piece of equipment called a "Hand Dynamometer Guard" has been described and illustrated. It has proved to be an aid in the treatment of both the disabled and normal hand. This guard aids and increases therapeutic efficiency because:

*Assistant Chief, Corrective Therapy, Physical Medicine and Rehabilitation Service, Veterans Administration Hospital, Long Beach, California.

Acknowledgement: Medical Illustration Section, Veterans Administration Hospital, Long Beach, California, for photographic illustrations.

DYNAMOMETER PLASTIC FINGER GUARD.



1. Fingers are prevented from interfering with the indicator.
2. The palm of the hand is prevented from causing pressure on the dial.
3. The patient is allowed to concentrate on the actual grip measurement test.
4. The validity of the hand dynamometer measurement is increased.
5. It aids in evaluating progress of treatment.
6. It is inexpensive and can be easily constructed.

LIBRARIES: REQUESTING EARLY ISSUES

The Association will pay 75c for the following issues:

May-June-July-November	1947
Jan.-Mar.-Aug.-Oct.	1948
Feb.-April-June-August	1949
Feb.-April	1950

February 1950 urgently needed.

EMOTIONAL COMPONENTS AND CONCOMITANTS OF PULMONARY TUBERCULOSIS

ALLEN R. LEVIN*

Such observations as "happy people do not contract tuberculosis" and "the cure of tuberculosis depends more on what the patient has in his head than on what he has in his chest" have been frequently made by the medical personnel of tuberculosis institutions. The implied notion of psychological determiners in the contraction, cause, and cure of the disease, and at a more extreme level, the concept of a tuberculosis personality have been seriously considered. Until very recently most of the thinking in this area has been in terms of hunches based on chance observation unverified by objective study and experiment.

Two objective investigations of the personality and behavior of active tuberculous patients, utilizing the Rorschach test, have been found in the literature. Singeisen¹ compared the Rorschach protocols of 50 chronic pulmonary tuberculous patients and 40 chronic cardiac patients with each other and with the protocols of physically normal persons. He concluded that tuberculous patients are "neurotic types which are predominantly impulsive and unstable and much of their discontent is the consequence of frustrated effort." Bourke² compared 11 hospitalized tuberculous patients with 11 hospitalized schizophrenic patients on 13 scoring factors considered to be diagnostic of schizophrenia. He hypothesized that "since the Rorschach personality organization of the patient is not different from that of the schizophrenic, it is suggested that the tuberculous patient utilizes a schizoid mode of adjustment."

The present investigation is essentially a repetition of the studies of Singeisen and Bourke.

EXPERIMENTAL STUDY

To evaluate the effectiveness of the psychological approach to the problems of tuberculous patients, a study was made of 28 patients with active pulmonary tuberculosis. The study was based upon measures of personality factors obtained within the first month after the patients were admitted to the hospital for treatment. An appraisal of their emotional and personality make-up and level of intellectual functioning was made by the administration of (1) the Rorschach test, which is a projective technique designed to gain insight into the individual's personality, and (2) the Wechsler-Bellevue Intelligence Scale, Form I, which is a measure of adult intelligence.

DESCRIPTION OF EXPERIMENTAL GROUP

Of the 48 unselected white World War II male patients admitted to the Veterans Administration Hospital No. 88, Memphis, Tennessee, between November 1, 1949, and February 28, 1950, 28 were given the Rorschach test and the Wechsler-Bellevue Intelligence Scale. Medical and administrative conditions beyond the control of the writer prevented the inclusion of the other 20 patients.

(a) *Age distribution*: The patients' ages ranged from 22 to 47 years and the mean age for the group was 30 years.

(b) *Marital status*: Twenty of the patients were married; two were single; five were divorced and one was widowed.

(c) *Education*: In formal education the group ranged from no schooling to two years of college education. The mean school years completed was 8.6.

(d) *Severity of illness*: The severity of illness was established by x-ray, sputum tests, and gastric washings by the ward physician, chief of professional services and the radiologist. The cases ranged from minimal to far advanced tuberculosis. Two of the cases were diagnosed as minimal tuberculosis, 15 as moderately advanced, and 11 as far advanced tuberculosis.

(e) *Occupational classification prior to illness*: Prior to their first hospitalization for tuberculosis, 11 of the patients were engaged in farming; seven were skilled workers; one was semi-skilled; four were unskilled; two were in sales occupations; one in service occupations; one in semi-professional occupations; and one was a student.

(f) *Duration of illness*: The range was from two months to 95 months. The mean length of time was 38.5 months.

(g) *Number of hospitalizations*: The mean number of hospitalizations since discharge from military service was 2.6 and the range was from one to seven.

(h) *Mental ability*: The mean full scale I.Q. was 97.00 with a range from 74 to 126. The standard deviation was 12.96. The mean verbal scale I.Q. was 97.11 with a range from 75 to 121 and a standard deviation of 13.08. The mean performance scale I.Q. was 96.86 with a range from 72 to 125 and a standard deviation of 13.34.

PROCEDURE

Each patient was given the Rorschach test and the Wechsler-Bellevue Intelligence Scale by the writer. No patient received both tests on the same day, and usually a week elapsed between the two

*Counseling Psychologist (Vocational), VA Medical Teaching Group Hospital, Memphis 15, Tennessee.

administrations. The writer also scored all of the tests and Rorschach scorings were submitted to two clinical psychologists for approval or correction. The Rorschach scoring, with the exception of FM, followed Beck³. The scoring of FM followed Klopfer⁴. The mean and standard deviation for the principal factors were computed and are presented in Table 1.

TABLE 1
Means and Standard Deviations of Rorschach Records
on 28 Tuberculosis Patients

SIGN	MEAN	S.D.	SIGN	MEAN	S.D.
R	18.21	7.29	FC	.61	.86
W	6.43	2.81	S	2.64	2.22
D	10.18	5.10	FY	3.04	2.02
Dd	1.54	1.43	F _%	51.86	15.97*
DW	.07	.26	F _%	63.39	13.56**
M	.89	.9*	F+ _%	79.61	14.21
M	1.04	1.00**	A _%	49.54	13.96
FM	2.36	1.69	Sum C	2.29	2.09
C	.11	.308	P	5.11	2.40
CF	1.82	2.05	An	1.61	2.81

*Klopfer's System

**Beck's System

The experimental group of 28 hospitalized tuberculous patients was compared with Beck's⁵ 81 schizophrenic patients and 64 normal control subjects. Beck used 17 quantitative test determinants which he considered to be of diagnostic significance in schizophrenia. Seven of these Rorschach response categories differentiated significantly between the schizophrenic group and the "normal" control subjects. They were Dd (rare detail response), DW (confabulatory response), C (pure color response), CF (color with form used secondarily), FC (form and color combined), F+ (good form response), and P (popular response).

These signs were tabulated for individuals in the tuberculous group, and the means and standard deviations for each of the seven signs of the Rorschach test were computed for the experimental group and Beck's schizophrenic patients. Student's *t* ratios were computed to determine the significance of the difference between the groups. The statistical results of this study are shown in Table 2.

TABLE 2

Comparison of Schizophrenic and Tuberculous groups on seven Rorschach factors. N=81 for the Schizophrenic group and 28 for the Tuberculous group.*

Schizophrenic Group			Tuberculous Group		t	Level of Significance
Sign	Mean	S.D.	Mean	S.D.		
Dd	8.83	12.0	1.54	1.43	5.32	.01
DW	.83	1.05	.07	.26	5.94	.01
C	.88	1.07	.11	.308	5.75	.01
CF	2.2	2.88	1.82	2.09	.736	n.s.
FC	.58	1.06	.61	.86	.15	n.s.
F+ _%	61.54	15.6	79.61	14.21	5.58	.01
P	3.95	2.29	5.11	2.40	2.21	.02

*These statistics are to be evaluated in the light of the fact that among the tuberculous patients there were respectively 26, 25, and 16 patients without DW, C, or CF responses.

The tuberculous group differed significantly in Dd, DW, C, F+ and P from the schizophrenic group in the direction of a healthier personality. The tuberculous group showed less rare detail responses, less confabulatory responses, less pure color responses, more responses of good form and more popular responses.

These findings are not in agreement with the findings of Bourke² who found that the tuberculous patients showed fewer popular responses and more responses of poor form than did the schizophrenic group. Neither are they in accord with his results which disclosed that the tuberculous group showed fewer human movement responses and more rejections than did the schizophrenic group.

In detecting neurosis, the tuberculous group was compared with Harrower-Erickson's⁷ group on nine "neurotic signs" on the Rorschach test, as measured by the criteria of Miale and Harrower-Erickson⁶. Harrower-Erickson's "neurotic signs." *t* ratios and tients and to 385 control subjects. She felt five or more of the nine "neurotic signs" strongly suggested the presence of a psychoneurosis. The signs were:

1. The number of responses not more than 25.
2. Human movement responses not more than one.
3. Animal movement responses greater than human movement responses.
4. Color shock occurs.
5. Shading shock occurs.
6. Rejection of one or more cards.
7. Over 50% form responses.
8. Over 50% animal and/or anatomical responses.
9. No form-color responses.

Table 3, compares the percentages of neurotic subjects and of tuberculous patients showing Miale and Harrower-Erickson's "neurotic signs." *t* ratios and level of significance were also compared.

TABLE 3
Rorschach Signs of Neurosis

	Percentage of subjects showing each sign			t	Level of Significance
	Neurotics N=74	TB N=28			
Total number of responses not more than 25	97	93	.51		n.s.
The number of M is not more than one	72	79	.79		n.s.
FM greater than M	86	71	.53		n.s.
Color shock occurs	46	75	2.89		.01
Shading shock occurs	59	64	.47		n.s.
Rejection of one or more cards	65	50	1.38		n.s.
Over 50% F responses	57	50	.63		n.s.
Over 50% A and/or An responses	57	50	.63		n.s.
No FC responses	79	57	2.10		.05

A comparison of Rorschach records of neurotic patients with those of active pulmonary tuberculous patients indicates that with the exception of color shock, none of the nine "neurotic signs" show any

significant differences at the one per cent level, within the limits set by this study.

The average number of "neurotic signs" in the experimental group was 5.9 and the range was from two to nine. Twenty-five of the 28 tuberculous patients showed more than three signs. In two of the cases all nine signs appeared.

The group of moderately advanced tuberculous patients responded with a significantly greater number of "neurotic signs" on the Rorschach test than the groups of minimal and far advanced tuberculous patients. The two patients with minimal tuberculosis averaged 5.5 signs compared with 6.9 signs shown by the moderately advanced patients and 5.5 signs shown by the far advanced tuberculous patients.

It should be emphasized that individually none of the signs indicate abnormality since the individual signs require interpretation in relation with every other sign in the Rorschach. Although there is no typical behavior, there is a definite trend toward a neurotic personality in this group.

The data of this study indicate that the tuberculous group as a whole has many neurotic signs. This is consistent with the findings of Singeison, who pointed out that tuberculous patients are neurotic types.

DISCUSSION

Psychological Aspects of Rehabilitating the Tuberculous Patient.

Suggestions pertaining to the psychological concomitants of tuberculosis may be advanced even though a tuberculous personality is seriously questioned by medical specialists. A comparison of the tuberculous patients' responses to the Rorschach test with those of schizophrenic patients, reveals that there is no indication of typical tuberculous behavior, but there is definite evidence that this group as a whole displays many neurotic symptoms.

We cannot from this study say whether tuberculosis merely accentuates personality maladjustments present prior to infection. It is important that we understand and treat the patients' neurotic behavior as part of their active medical care during their long stay in the hospital.

As pointed out by Wittkower⁸, "the patient needs more from his doctor than merely a cheerful bedside manner and skill in physical diagnosis and handling." He needs help to understand the tensions and anxieties which existed prior to admission and the reason for the changes in himself which presumably the illness has caused. The foundation for successful treatment of tuberculosis is an understanding of the individual and his personality in addition to the treatment of his diseased lungs.

Since the need for hospital treatment may subject the tuberculous patient to more emotional and mental strain than is encountered by most sick people,

it is important that the rehabilitation team, through the medium of the physician, psychiatrist, psychologist, nurse, physical therapist, corrective therapist, occupational therapist, manual arts therapist, social worker, vocational counselor, recreational leader, and others, comes in contact with the patient as soon after admission to the hospital as possible to aid him to adjust to the hospital environment, his anxiety, fearfulness, self-centered behavior, marked depression, tensions, and other difficulties. During the initial stage of hospitalization, these various disciplines are brought together to focus on the individual as a whole in terms of his total environment and his total problems.

One of the greatest problems in the rehabilitation of the tuberculous patient is that of motivation—encouraging and convincing the patients that they can rehabilitate themselves. The motivation to get well depends on many factors, but most of all on the realistic encouragement of those closest to the patients. Also, the motivational problem during the early stages of the illness is of the greatest significance, and is the one paramount factor upon which the success of the entire rehabilitation program rests. There are great individual differences among tuberculous patients in regard to how they react to their illness. In this reaction, as in other serious problems of life, the personality prior to onset of the disease is a significant factor influencing the patient's reaction to motivational activities.

Motivation involves gaining the patient's confidence and cooperation. It involves overcoming the strong dependency needs that the hospital provides, so that the patient will look forward to, not the protection of the hospital, but an independent life in the community. Motivation involves, for example, helping the patient overcome wishful thinking regarding recovery, designing occupational plans, and developing a sound understanding of home and community living. In order for the program to be successful, the patient must be stimulated to the end that he will participate willingly in the rehabilitation program.

This is the problem of motivation which must be a part of the whole program of rehabilitation, and which is especially significant during the last six months of the patient's hospitalization. The responsibility for motivation must be shared by all. It is a cooperative undertaking, and it is important that the entire staff understand that without it rehabilitation cannot be successful.

In total rehabilitation programs the tuberculous patients are assisted in developing an understanding of their limitations, physical and psychological, so that they will reach levels of self-planning, create their own motivation, and develop programs of

working toward their objectives. Such objectives mean most to patients if they have been selected by the patients themselves on realistic factors. Patients then can accept the responsibilities for making decisions and carrying them through. Whenever necessary, assistance and counseling are provided for the understanding of the physical and mental limitations, work tolerance, aptitudes, interests, abilities, and of the educational, social, and economic requirements for various kinds of work. Most patients are not only willing but eager to regain activities and return to useful living. They need only to be provided with meaningful counseling.

SUMMARY

A group of 28 hospitalized active pulmonary tuberculous patients was compared with Beck's schizophrenic patients on seven Rorschach response categories which differentiated significantly between his schizophrenic group and his "normal" control subjects. They were Dd, DW, C, CF, FC, F+, and P. On five signs, namely Dd, DW, C, F+, and P, the tuberculous group differed significantly from the schizophrenic group in the direction of a healthier personality.

The group was also compared with Harrower-Erickson's group on nine "neurotic signs" on the

Rorschach test, as measured by the criteria of Miale and Harrower-Erickson. At the one per cent level, no significant difference was found between the two groups, with the exception of color shock.

Although there is no indication of typical tuberculous personality, a definite trend in the direction of a neurotic personality is indicated.

Our study focuses attention on the complexity of the problem faced by the tuberculous patient and by the team of workers interested in his rehabilitation.

REFERENCES

1. Singeisen, F.: Rorschachbefunde bei Lungentuberkulosen und Herzkranken, *Schweizer Archiv für Neurologie und Psychiatrie*, 1940, 45, 230.
2. Bourke, W.: The incidence of Schizophrenic Signs in Tuberculosis and Schizophrenic Hospital Patients as Measured by the Rorschach Test, Master's Thesis, Tulane University, 1949.
3. Beck, S. J.: Rorschach's Test, 1949.
4. Klopfer, B., and Kelley, D. M.: The Rorschach Technique, 1946.
5. Beck, S. J.: Personality Structure in Schizophrenia, *Nerv. Ment. Dis. Monogr.*, 1938.
6. Miale, F. R., and Harrower-Erickson, M. R.: Personality Structure in the Psychoneurosis, *Rorschach Res. Exch.*, 1940, 4, 71.
7. Harrower-Erickson, M. R.: The Value and Limitations of the So-called "Neurotic Signs," *Rorschach Res. Exch.*, 1942, 6, 109.
8. Wittkower, E.: A Psychiatrist Looks at Tuberculosis, 1949, The National Association for the Prevention of Tuberculosis.

AWARDS COMMITTEE

With another successful convention tucked away and the second John E. Davis Award presented to Dr. A. B. C. Knudson, Chief Physical Medicine and Rehabilitation Service of the Veterans Administration, Washington, D. C., the Awards Committee continues its search for the third recipient of this Award. The presentation will take place at our eighth Annual Convention next year in Cleveland, Ohio.

The Chairman for the Awards Committee is George Devins, a past president of our Association and originator of the John E. Davis Award. Committee members for this year are:

Sam Boruchov, 147-82 67th Road, Kew Garden Hills, N. Y., Area No. 1

Chris Kopf, 2015 Birch St., Scotch Plains, N. J., Area No. 2

John Dixon, 319 Clark Blvd., Murfreesboro, Tenn., Area No. 3

Leon Edman, VA Area Medical Office, Ft. Snelling, St. Paul, Minn., Area No. 4

Boyce Nall, V.A. Hospital, Temple, Texas, Area No. 5

Rudy Jahn, V.A. Hospital, Long Beach, Calif., Area No. 6

These committee members will appoint subcommittees that will function in each area to orient the members in regard to the types of awards available and to receive suggested candidates for them. Another function of the subcommittee in the area is to assist in screening the suggested candidates prior to submitting them to the National Awards Commit-

tee Chairman.

In addition to the John E. Davis Award previously mentioned, the Executive Board and the Representative Assembly approved the Honorary Membership, the Life Membership Awards and a Special Award that will be presented to the Corrective Therapist giving the most outstanding paper at our forthcoming convention. Papers are to be judged by a special committee appointed for this purpose. A quotation from the originator's letter is stated to clarify the type of paper to be considered; "With the specification that the paper submitted must embody the results of original research not previously published in the field of Corrective Therapy that contestants be limited to members or group of members of recognized Corrective Therapists; that the selected paper is to be chosen from those presented at the Annual Convention of the Association for Physical and Mental Rehabilitation and that the selected paper is to be published in the *Annals*."

Corrective Therapists selected to present papers by the Program Committee shall prepare their papers well in advance and submit them to the Awards Committee as soon as they are prepared. Six copies should be forwarded so that each judge of the Special Committee may pass judgment as quickly as possible.

Names of candidates for Honorary Membership, Life Membership and Fellow Awards should be forwarded to the respective area committee chairman. Suggestions for new awards and improvements in the present award system should also be sent in to the Area Chairman mentioned in this notice.

AN EXERCISE PROGRAM FOR SEVERELY DISABLED PATIENTS

PAUL J. PASTOR, B.S., M.Ed.*

INTRODUCTION

The problem being created by the increasing numbers of severely disabled patients in this Veterans Hospital has impressed us with the need for the development of a systematized exercise regimen as a starting point for treatment of these cases.

Whereas this exercise procedure was initially designed to meet the needs of the quadriplegic patient, experience has shown that it has a very broad application, and has as its basis a passive exercise procedure aimed at muscular relaxation and the maintenance of tissue-tone and joint range.

The physiatrist's medical prescription initiates the Corrective Therapy process. It indicates the program to be given the patient, the objectives, and the specific considerations that must be observed in treatment (heart disease, osteoporosis, etc.).

In addition to the physiatrist's prescription, at this Hospital, we use many procedures to get a complete understanding of our patients' personalities and hospital adjustment. They consist of consultations with ward physicians, nurses, and other ward personnel, weekly inter-therapy conferences, rehabilitation boards, and formal and informal interviews with the patient.

I mention the above to give emphasis to the fact that the therapist must be constantly alert to determine the personality of the patient and detect changes in his mood.

There is another subject that needs continuing emphasis; and, that is the atmosphere of the Corrective Therapy clinic.

Treatment in the Corrective Therapy clinic has psychological and social values for the severely disabled person. The air of friendliness, understanding, and encouragement can do much to elevate the morale of these patients (companionship in a friendly atmosphere is a great catalyzer for physical restoration).

Although the literature reveals much concerning the maintenance of the physical function of the body, even though the part be completely paralyzed, the writer was unable to find references to a systematized procedure for severely disabled persons in a clinic or gymnasium situation (i.e., work on mats).

BASIC CONSIDERATIONS

This exercise procedure is basically designed for the quadriplegic patient who has little or no muscle function in any of his four extremities.

*Corrective Therapist, McGuire VA Hospital, Richmond 19, Virginia.

We have modified the treatment in accordance with patients' individual needs above this "base-line."

Certain positions in this exercise procedure, notably, the stretching of hamstring muscles (see Figure 2), were approached with caution, using first, normal individuals to be certain the procedure was not painful. And then, in all paralyzed individuals, the procedure is increased within the criteria of spasm responses.

Experience revealed that where caution is always a basic consideration, we do not encounter difficulties.

To the uninitiated, a word of warning is in order in dealing with paralyzed individuals. Therefore, the writer feels compelled to point out that in any passive movement of major body segments, involving multiple muscle attachments, a knowledge of anatomy, kinesiology, and normal physiology is necessary. A movement outside of these basic factors may result in tears or other injuries.

No massive movements should be made without a preliminary warmup period whether this be a heating procedure, or simple, mildly administered small movements preceding the larger movements.

It is important to "individualize" muscles by a loosening procedure if optimum benefit is to be derived from treatment. This "individualization" of muscles is not done with the idea of treating each muscle, individually, but rather, it is an attempt to more effectively administer complete generalized body exercises by having the individual muscles predisposed to thorough treatment.

Bearing in mind that the patient is continually being affected psychologically and socially, as well as physically, the therapist should work to create a positive environment that will be conducive to good rehabilitation practice.

THE PHYSICAL PLANT

The physical equipment needed is very simple, consisting of the following:

1. *Mats*—regular medium-sized gymnasium mats. These mats are covered by large linen sheets. A foam-rubber pad (2'x6'), covered by a rubber sheet, and then a linen sheet, is centered on each mat. Pillows should be available for use in supporting and padding the patient's body parts.
2. *Weights*—are used for various purposes. They include weighted "saddle-bags," dumbbells, and pulley-weights.
3. *For Quadriplegics, specifically*—a "tie-up board" (a standard horizontal bar with adjustable board to which the patient's pelvis can be strapped) is

used to maintain the quadriplegic patient in an erect position. Pillows pad the horizontal bar and protect the patient's chest and axillary areas. Web straps hold him against the board. And, long-leg braces allow him to be placed in a standing position. Full-length, portable mirrors are placed so the patient can observe himself.

4. *Other Equipment* — reciprocal pulleys, pulley-weights, and adapted, stationary bicycles can be used for reciprocal exercises. Modified barbells and other gymnastic apparatus may find need in specific cases.
5. *Radio*—a radio, or phonograph, can add to the therapeutic setting, and is an aid in timing the exercise movements, rhythmically.

The relationship between the patient and therapist should be characterized by friendliness, cooperation, and understanding.

1. *Supine Position*: The patient is placed on the mat in a supine position, making sure his clothing is not binding. Stretching and loosening techniques, as those used in athletic training, are utilized to "individualize" muscles and reduce spasms of the lower extremities and hips. This "warm-up" procedure precedes the larger movements that are to follow.

2. *Hips and Knees Flexed* (Figure 1): The therapist abducts the patient's lower extremities and allows them to come to rest against the lateral aspects of his (the therapist's) knees. The patient's legs are now "held" by the therapist's legs, thereby freeing the therapist's hands. This procedure of going with the flexion movements of the hips and knees through their full range of contractility has a relaxing effect on the flexion musculature. The patient's flexors are most probably tense because of the positions maintained in a wheelchair and in "sitting" in bed. Flexion movements are continued until "relaxation" takes place.

3. *Extension of the Knees* (Figure 2): The knees are gradually worked into extension. One hand is placed on the patella, the other on the heelcord, near the calcaneum. One lower extremity, then the other, is worked. The feet are moved in dorsi-flexion.

4. *Reciprocal Extension* (Figure 3): The extension movements started above are slowly given reciprocal movements as in cycling. The direction of movement is parallel to the floor. In the beginning, the movements are very short and primarily flexion movements. These are lengthened until the lower extremities are fully extended. (It is to be noted how reciprocal action can be attained even in a case of moderately severe spasms by utilizing this reflex mechanism. As one limb is flexed, the contra-lateral limb relaxes and is then quite easily moved into extension. Rhythm is a helpful factor.)

5. *Extension of Hips and Knees* (Figure 4): The lower extremities are extended from the "cycling" exercise above until the hips and knees are completely extended. The therapist places one hand on the patella and the other on the heelcord, and carefully extends the lower extremities, one at a time, at the knee joint. The feet are moved through their range of movement. During this procedure, the lower extremities are in an abducted position.

6. *Abduction and Circumduction of Lower Extremities* (Figure 5): The lower extremities are moved in abduction after again loosening, stretching, and "individualizing" the adductors and abductors. They are then circumducted to include all the movements attributed to the hip joint.

7. *Extension of the Trunk* (Figure 6): The patient is returned to the starting supine position, and his vertebral column is slowly and carefully lifted, starting in the lumbar area. This lifting process is done right up the spinal column. The patient's arms may be placed over his head if maximum extension is desired. The lifting process is in a direction perpendicular to the vertebral column. A rolled pillow, or towel, may be substituted for the lifting process. It is systematically moved up the spinal column to get the desired loosening effects. (The nature of the application of this exercise is dependent on the physical condition of the individual patient's trunk.)

At this point, the patient may be reminded that shoulder exercises, in bed, morning and night, can be helpful in relieving soreness and tenseness in the musculature of the neck and shoulder girdle (shoulder-shrugging, adduction of scapulae, and rotary movements of the shoulder girdle).

8. *Trunk Flexion* (Figure 7): The therapist straddles the patient, bearing his own weight on flexed knees, and grasping the patient's upper extremities, proceeds to move him in flexion movements of the trunk both forward and laterally, and, then, in rotation, left and right. (The patient is in a supine position, legs abducted.)

9. *Shoulder Girdle Exercises* (Figure 8): The patient is maintained in a sitting position, the therapist kneeling behind him. The patient exercises his shoulder girdle musculature in four ways if he can: (1) shoulder-shrugging, (2) rotary movement forward, (3) rotary movement backward, and (4) adduction of the scapulae. If there is no contra-indication, the therapist may move the upper extremities through their full range of movement.

10. *Balanced Sitting* (Figure 9): If possible, the patient's lower extremities, hips, and trunk are flexed, and he is placed in a balanced (quadri-lateral) sitting position. His arms are flexed and inserted under the knees. This holds the trunk in the flexed position. Many quadriplegics have sufficient flexion strength

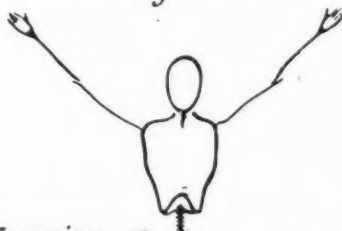
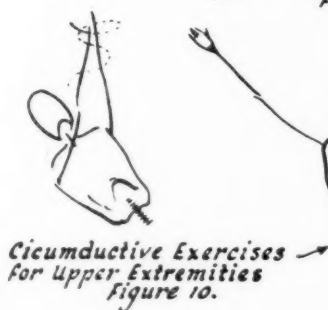
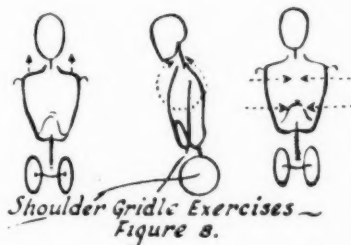
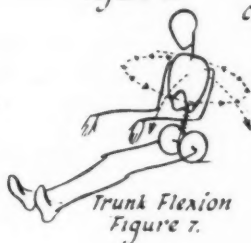
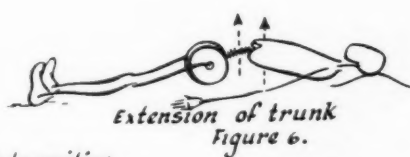
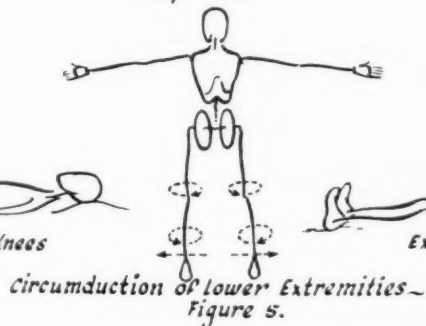
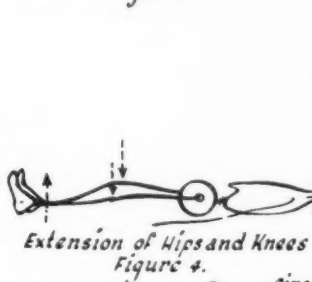
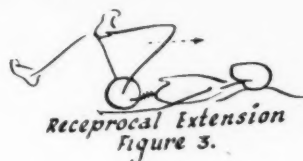
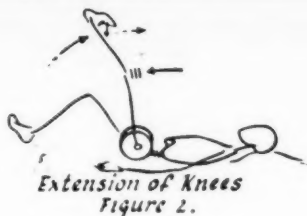
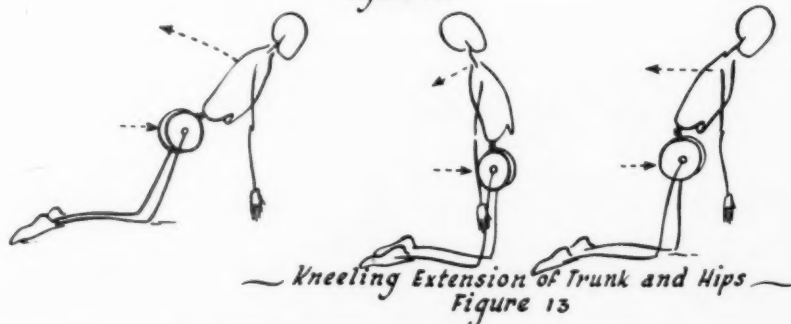
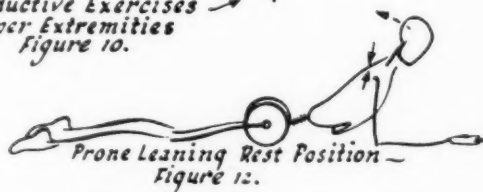


Figure 11.



of the upper extremities to maintain this position. If this position is not possible, a "tailor's position," with lower extremities flexed, ankles crossed, may be attempted. The patient's upper extremities flexed ankles crossed, may be attempted. The patient's upper extremities are placed over the lower extremities where they afford the best balance. Following this exercise, while the patient is in a sitting position, the therapist can rotate the patient's trunk, left and right.

11. *Circumductive Exercises for Upper Extremities* (Figure 10): While in the supine position, the patient's upper extremities are circumducted at the shoulder joint. The elbows, wrists, hands, and fingers are carried through their range of movement. With the upper extremities extended, shaking movements, translated from the hands to the shoulder joint and shoulder girdle, are helpful in loosening and stretching the musculature involved.

The condition of the upper extremities indicates where emphasis is to be made. Reciprocal exercises are also given at this point. The shoulder girdle musculature is lifted clear of the mat during exercise.

Note: (Figure 11) If a patient has flexion contractions of the upper extremities, the loosening and stretching procedure is carried as far as feasible, and, then, the limbs are placed in a position as nearly perpendicular to the mid-line of the body as possible. The hands are turned into supine positions and weights (dumbbells or "saddle-bags") are applied at the hands and forearms. Pillows are placed under the arms, and over the arms where the weights rest. This position is maintained five to ten minutes. Care must be taken that circulation and nerve supply are not impaired. If movement is possible, it is done against resistance of weights.

12. *Prone Leaning Rest Position* (Figure 12): The patient is now turned over into the prone position. If his toes tend to dig into the mat, place a pillow under his feet. The stretching and loosening techniques utilized on the anterior aspects of the body are now used on the posterior aspects. The lower extremities are flexed at the knees and extended at the hips. Extension of the knees and hips is also done. The

patient rests on his elbows, in a balanced position, during this procedure. He can repeat shoulder girdle exercises of shrugging and adduction of the scapulae, if desired. Neck extension is done as a part of this routine, also. The patient's knees can be flexed and his heelcords stretched.

13. *Kneeling Extension of Trunk and Hips* (Figure 13): "The Spasm-breaker": The therapist slowly lifts the patient to his knees. This is done slowly to avoid dizziness and fainting. The therapist's feet and lower extremities guide the patient's upward movement. The therapist, then, places his knees in a position that will stabilize the patient. The following exercise is then passively administered: (1) trunk flexion, (2) trunk extension, (3) lateral flexion, right and left, and (4) rotation of the trunk. After this exercise, the patient's trunk is slightly flexed, and he is encouraged to use his arms in any manner he possibly can.

14. *Relaxation Period Following Exercises*: The patient is turned to the supine position. He is placed in a relaxed, extended position, legs and arms abducted, for five to ten minutes, or longer, is desired. A pillow may be placed under his spine, in the region of the lumbar vertebrae.

SUMMARY

Extension is the movement that is emphasized in treatment, since the extensor musculature is primarily concerned with supporting the body against gravity. The tendency is toward flexion in most everything the patient does whether it be sitting in a wheelchair, or propping his head up with pillows in bed. This exercise procedure is an attempt to counteract this flexion tendency.

Time devoted to each treatment will vary with the individual patient, and is determined by the judgment of the therapist based upon the information he has accumulated as well as the patient's reaction to treatment.

For quadriplegics, a routine of standing in long-leg braces at a "tie-up board" and the use of other adapted equipment is used to augment the exercise regimen presented here. This program is to be geared to the individual patient and his needs.

SIMPLICITY IS THE ESSENCE OF EFFICIENCY

The best thing about the future is that it comes one day at a time.
If you don't have time to enjoy what you have, why try to get more.
To get rich, simply learn how to make money faster than you spend it.
From there on, it's easy.

"From Other Journals"

H. J. RALSTON and B. LIBET, "The Question of Tonus in Skeletal Muscle," *American Journal of Physical Medicine*, 32:85-92, April, 1953.

Skeletal muscle tone commonly refers to a persistence of active muscle contraction due to continued activation of some muscle fibers by a persistent bombardment of motor nerve impulses arising in the central nervous system. In this case in the normal resting human one should be able to detect action potentials in skeletal muscles corresponding to the continued firing of the muscle fibers by their motor nerves. The electromyographic evidence does not bear this out. The hypothesis that stretch reflex discharge occurs automatically to help maintain posture is not supported by the evidence. In addition to a variable amount of balancing of body parts on the bony skeleton, tissue elasticity is usually used to maintain posture. The main reason fatigue does not occur during rest or moderate activity is that our muscles are not continuously active. Posture is continually altered to avoid using any one muscle for more than a short time, and in active motor patterns a given muscle is active generally for only a fraction of a second. The evidence contradicts the principle of reciprocal innervation of antagonistic muscles in normal man and excludes it as the dominating factor in all motor patterns. Augmentation and diminution of contraction actually do proceed concurrently in anatomically antagonistic muscles. There is need to restate the evidence upon which the conception of active tone rests.

PJR

J. M. TANNER, "The Effect of Weight-Training on Physique," *American Journal of Physical Anthropology*, 10:427-462, December, 1952.

We have practically no quantitative information on the degree to which human skeletal muscles can be made to grow by exercise, how much is retained after ceasing to exercise, effect of exercise on growth, or what sort of exercise is best. Ten healthy mesomorphic young men were placed on a weight training routine for four months. In every case there was a significant increase in the circumference of the upper arm, ranging from 4% to 11%. Forearm circumference gains were from 1% to 7%. Five subjects showed significant decreases in thigh circumference and all subjects showed a decrease in calf circumference. More calf tissue was lost transversely and the calf became more oval in cross section. The apparently different distribution of growth potential has no explanation at the moment. Weight changes were small, but there seemed to be a redistribution of fat. No significant changes were shown in chest circumference or expansion. Apparent strength increases ranged from 10% to 80%, but some of this was due to acquiring techniques rather than increased strength. Somatotypes were not changed. There were no significant changes in 24 hour creatinine excretion. Four months after cessation of training all measurements tended to have reverted to their pre-training values. In most cases the subject stood a little straighter after training.

PJR

T. K. CURETON, "Exercise of Executives with Relationships to Health and Working Efficiency," *Journal of Physical Education*, January-February, 1953, 50:57-58.

One of the most serious modern day health problems is the rapid deterioration of muscular and circulatory-respiratory endurance as a concomitant of sedentary living. This tendency is associated with lack of full range bodily movements which promote circulation and nutrition; and there results an anoxic fatigue due to lowered amounts of oxygen getting to many parts of the body. Motor fitness can be fractionated into balance, flexibility, agility, strength, power and endurance. All deteriorate rapidly unless there are regular exercises involving these functional aspects. Much of the trouble seems to lie in the tendency of the arterioles and capillaries to diminish in size with disuse. Much of modern "ageing" is thought to be associated with gradual diminution of the glandular functions. Prolonged mental anxiety produces constriction of the small blood vessels, as

does excessive smoking. In all such cases the small vessels need to be opened by rather full activity in which there is dynamic bodily activity great enough to raise the body temperature. The best way is to participate regularly in rhythmic endurance exercises, swimming, walking, rowing, cycling, skiing, dancing, skating, etc.

PJR

E. P. GALIONI, F. H. ADAMS, and F. F. TALLMAN, "Intensive Treatment of Back-Ward Patients—A Controlled Pilot Study," *The American Journal of Psychiatry*, 109:576-583, February, 1953.

The California Department of Mental Hygiene conducted an 18 months study at Stockton State Hospital to determine (1) whether more adequate staffing would improve a group of chronic mental patients and (2) what comprised "adequate" staffing. Two hundred patients were selected at random as an experimental group and were matched as nearly as possible with a control group. The majority of the patients were diagnosed as dementia praecox, had less than a 10th grade education, were single, tidy, of undisturbed behavior, white, over 40 years of age, and more than 9 years hospitalization. Twenty-seven patients in the experimental group were separated from the hospital, as compared with only 10 from the control group. If patients are given more attention and more activities in therapeutic and optimistic atmosphere good results are likely to follow.

J.T.

J. B. DeC. M. SAUNDERS, VERNE T. INMAN and HOWARD D. EBERHART, "The Major Determinants in Normal and Pathological Gait," *The Journal of Bone and Joint Surgery*, 35-A:543-558, July, 1953.

An appreciation of the fundamental determinants of human locomotion will enable the surgeon to analyze the disorders of locomotion with greater precision and to apply corrective measures. The displacement of the center of gravity may be considered as the summation of all forces concerned with the translation of the body from one point to another. The body makes every attempt to conserve energy. Pelvic rotation flattens the arc of the passage of the center of gravity by elevating the extremities of that arc. Pelvic tilt cuts the vertical displacement of the center of gravity in half. Knee flexion in the stance phase also depresses the summit of the arc. Foot and knee mechanism smooth the gait by establishing a sinusoidal pathway for its progress, with a great reduction of energy cost. Lateral displacement of the pelvis is corrected by the existence of the tibiofemoral angle. High heels cause an exaggerated movement of the pelvis and increased hip and knee flexion. Pathological gait may be viewed as an attempt to preserve as low a level of energy consumption as possible by exaggerations of the motions at the unaffected limbs. Thus a stiff knee results in excessive elevation of the pelvis on the affected side, or an increase in heel rise is required on the normal side. The energy necessary to initiate the swing phase on the side of the stiff knee is almost trebled and prostheses which require the wearer to spend additional energy are disliked by amputees.

PJR

GRACE BAINBRIDGE, et al., "Dance-Mime: A Contribution to Treatment in Psychiatry," *The Journal of Mental Hygiene*, XCIX:308-314, April, 1953.

Dance may be a mode of expression in which the patient can formulate his own symbolism and relate it to reality. Its application makes use of the fundamental tendency of the individual to discharge emotional tensions in muscular movement. Mood and emotional states find expression in body posture, movements and gestures. Part of the therapist's task is to teach different kinds of movements, leading the patients to discover their own natural bents and individual difficulties. A good basic rhythm is necessary for coordination. A sense of enjoyment and fun and indispensable. Even when the sense of rhythm is apparently lost, it can often be reawakened by the therapist actually moving the patient about. Dance-mime is essentially a group technique and aims at the reestablishment of the normal relationship between the individual and the group, which is disturbed by the individual's illness. The therapist should have a proper understanding of what is taking place so that some measure of guidance and control can be used as necessary.

PJR

Editorials

MAKING USE OF THE MOTIVATING POWER OF DISABILITY

One of the frequent concomitants of disability, is the motivating power developed, from acquiring remedial forms of disability or invalidism. The busy therapist, treating groups of patients, following schedules, writing progress notes, too often becomes so involved in the application of the latest technique, that he fails to recognize the personality changes that are taking place in the patient.

When an individual faces the tremendous adjustment problems resulting from a serious accident, or the acquiring of a disabling disease, he faces an abrupt and frustrating change in his way of life. He finds it difficult to accept the fact that his body image has been broken. It is hard to accept, especially if he has been an active go-getting personality. He is unable to accept the fact that only the pleasant memories of the past remain and that life must begin a-new with what he has left. He finds it difficult, at times impossible, to accept the fact that the immutable laws of compensation will work for him, as they have for so many others. It is the duty and privilege of the therapist to help the patient to become aware of the full importance of developing a new way of life. Those with a mild disability are frequently less motivated by their disability, than the more seriously disabled, and may over-compensate by assuming an air of bravado, and begin to give orders to any who will carry them out.

Compensation is active in the nature of man. With the severely disabled life to be lived again as it was originally planned is no longer possible. From the day of injury or the incidence of disease, a new way of life has to be found.

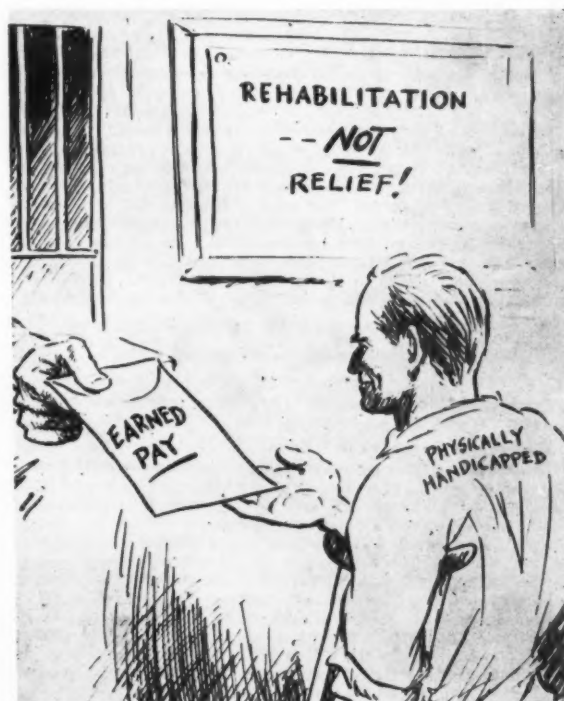
There are few persons who do not have an avocation as well as a vocation. The Corrective Therapist will do well to acquaint himself with some of the aspirations and habits of the patient prior to his personal disaster. It is quite possible that the individual has developed an avocation or hobby interest that he has never been able to pursue to his complete satisfaction.

Or perhaps the psychological records, always available to the therapist, reveal the fact that he was a salesman with coordination of eye and hand and a manual dexterity that had never been fully developed. When the Corrective Therapist is aware of the possibilities that lie within reach of such a patient, he will urge attendance at Manual Arts Therapy, in order to try the skills involved in watch repairing. Such a patient may also become interested

in making jewelry. He may even acquire the creative skill required in the designing of costume jewelry. In this changing world there is always a place for one willing to work and capable of creating. A store of his own is a natural outcome of such interest. He can now begin to feel the law of compensation at work. His hobby interest has been converted into an absorbing vocational interest which not only furnishes additional income and security, but also enables him to serve others in a way that was not possible, when selling fine oriental rugs.

While many of the severely disabled receive sufficient compensation to support themselves without employment, this soon becomes a frustrating way of life. All individuals need to feel that they belong to something that is creative and contributing to the general welfare. They want to feel a part of their community.

In the contemporary life of nations today, with strife, turmoil and economic disaster facing many of our allies, a reserve of happy productive manpower becomes of vital concern to all of us. The Corrective Therapist who overlooks his privilege and opportunity to assist the patient who has not been motivated by his disability, is losing a chance to make a significant contribution to the efforts of the rehabilitation team.





Book Reviews



LIGHT THERAPY, by Richard Kovacs, M.D., late Professor of Physical Medicine, New York, Polyclinic Medical School and Hospital. First Edition, Lexide, \$2.25. Pp. 112, with illustrations. Charles C. Thomas, Publisher, 301-327 East Lawrence Ave., Springfield, Illinois, 1950.

In this monograph we have a practical presentation of the therapeutic applications of infrared, biminous and ultraviolet radiation, including heliotherapy. The subject is properly introduced by a short history of light therapy. This is followed by a general discussion of the physics of radiant energy. The subsequent chapters consider each of the three forms of radiation in light therapy, describing their physical nature, their physical, physiochemical and physiologic effects, their indications and contraindications, their technic of application and dosage, and their dangers. The value of this work as a source of reference is enhanced by a good index and bibliography, the latter listing forty-five references, with none more recent than 1947. A very legible type and adequate illustrations contribute to the readability of the text. Although much of the material can be found in the Author's textbook, electrotherapy and Light Therapy, this handbook can be recommended to those who do not require the large volume and whose interests and particular needs may be limited to light therapy alone.

Frederick J. Balsam, M.D.

HYPNOSIS IN MODERN MEDICINE. Edited by Jerome M. Schneck. (Springfield, Illinois: Charles C. Thomas, 1953.)

Doctor Schneck, in his introduction to this volume, points out that investigations in hypnosis have been done principally by psychologists so that it has been the psychiatrists in the medical profession who have been more interested in this form of therapy than those in the other specialties. More recently, however, the focus has been centered in its application to other medical areas, and this volume reports on the progress of this specialized therapeutic tool in several fields in addition to psychiatry.

Each of the eleven chapters is written by an authority who reviews the principles of hypnosis and its application to his particular field. The task is well done.

The first chapter of the book is a very interesting historical account of medical hypnosis from the time of Mesmer to the present era of psychoanalysis. The list of contributors is an impressive one. Each has written very well, and the book offers interesting reading. It represents an up-to-date account of the use of hypnosis in several of the fields of medicine.

The book is not so technical but what the layman can find it interesting, but the physician and others in the fields allied to medicine will find it of particular value.

The volume is concluded with a chapter on the physiologic aspects of hypnosis and, finally, one on "Instruction in Hypnosis." This latter title is somewhat misleading because it does not deal with the technique of inducing hypnosis but rather represents a thesis on some of the principles and methods of teaching.

S. D. KLOW, M.D., F.A.P.A.

PHYSICAL CAPACITIES AND JOB PLACEMENT by Bert Hanman, Stockholm: Nordisk Rotogravyr (Distributed in U.S.A. by John de Graff, Inc.), 1951. 167 pp. \$5.00.

Proper job placement and follow-up are probably the most neglected phase of rehabilitation. Satisfactory job placement in general has been stimulated as a result of the war efforts to classify and use as many persons as possible to the advantage of the military and industrial defense needs of the nation. As a result, various systems of placement have been established. Hanman presents these techniques with their pros and cons and then introduces the "Specific Method," which he feels overcomes "the numerous disadvantages of the previous plans."

The text attempts to solve the problem of how to place a person in the proper job to meet his physiological abilities. Hanman assumes that no one has the physiological and psychological abilities to fit all occupations; therefore

"Everyone is occupationally handicapped for many jobs." From this thesis he arrives at certain conclusions as to the best method of placement.

The book is a valuable analysis and study of the theories and practices of job placement as prescribed in nine European countries and the United States. In spite of the highly technical material, it is easily read and is understandable. Throughout the text, where reference is made to a placement form a sample copy is provided so that the reader may readily follow the author's comments.

It is felt that this book is a must for professional people concerned with counseling and job placement, vocational rehabilitation and related fields.

HJB

BASIC KINESIOLOGY, Ferd John Lipovich, Minneapolis: Burgess Publishing Company, 1952. 105 pp. \$3.75.

Described by the author as a "bridge" between physics and physical education, this text falls into three natural divisions. The first deals with the mechanics of levers, momentum and force. Illustrative problems are given and conclusions are drawn from their solution. This sort of material has not received much attention in recent textbooks on kinesiology and therapists who lack training in physics will find it a clear and useful introduction to the subject. The second part deals largely with posture. The third section is concerned with the study of muscle action. Since the author confines his remarks to the 24 muscles which he considers basic in physical activity, the material in this portion of the text is not in sufficient detail to meet the needs of the Corrective Therapist. The book is illustrated with numerous drawings and contains a large Muscular Movement Chart.

PJR

THE ORGANIZATION AND ADMINISTRATION OF INTRAMURAL SPORTS, by Louis E. Means, St. Louis: C. V. Mosby Company, 1952. 466 pp. \$5.75.

This book provides valuable information concerning the organization, supervision and administration of intramural sports program. Such subjects as historical background, aims and objectives, administrative problems and responsibilities, first aid, competition, selection and supervision of activities, awards, co-recreational programs and financing are covered in some detail. Active recreation has been advocated through the centuries by many great educators. This text indicates the way in which many sports may be successfully organized and supervised. Those working in the field of mental and physical rehabilitation with responsibility for recreational activities will find it invaluable.

T.H.

BASIC PROBLEMS IN PSYCHIATRY, Joseph Wortis, Editor, New York: Grune and Stratton, 1953. 186 pp. \$4.50.

In order for a profession to progress and be dynamic, it is necessary for it to conduct periodic objective re-evaluations. Dr. Joseph Wortis has done just that for psychiatry in his book *The Basic Problems in Psychiatry*.

Much of the material and philosophy presented will unquestionably stir considerable controversy. This should be considered a healthy sign, as intelligent cerebration with organized action may result in scientific facts rather than "... dogmatic statements of great men ..."

The book is a survey of six basic areas of the field of psychiatry. Each chapter is written by an authority in his specific subject. The book is introduced and concluded with comments by Dr. Wortis, the editor. The material was purposely presented in a broad generalized manner with the hope that it would stimulate the reader to investigate "... the more specific books in a more critical or, perhaps, understanding spirit."

The text and the editor, as described by Dr. W. Horsley Gantt, Director of the Pavlovian Laboratory at John Hopkins University, follows the course of an "Objective Psychiatry." The main thesis set forth is that of placing psychiatry on a solid scientific basis. As Dr. Wortis writes, "We (psychiatrists) can all afford to discourse at length and get away with it, because there is not enough laboratory or experimental work being done to prove or disprove our points. ..."

This book should be used as a catalytic agent and placed on the repeat reading shelves of all medical personnel, whether working with psychiatric or general medical patients.

HJB

Chapter Activities

OHIO-KENTUCKY CHAPTER MEETS

Dayton V.A. hospital was host to the Ohio-Kentucky Chapter Sept. 19, 1953. Mr. Worth Randall, his staff, and Dr. Leo Rosenberg, Psychiatrist, arranged an inspiring program. The theme was "Treatment of the Geriatric Patient."

We were honored by the presence of Dr. John Eisle Davis and his wife, and Mr. Harold Robinson, President of the Association.

The report of the Secretary-Treasurer shows an active, expanding chapter with cash in the bank.

Membership is increasing and consideration was given to inviting membership from hospitals at Dearborn, Fort Custer, and Saginaw to "join up."

Recognition was given to Chapter Advisors by extending honorary memberships in the Chapter.

Dr. Neuer, the new Chief of Physical Medicine at Chillicothe, will become a member of the Advisory Board.

Elections for President-Elect resulted in the selection of Earl W. Mason, Chief at Louisville, Ky. Earl extended an invitation to have semi-annual meeting at Louisville next March.

The rest of the business meeting was devoted to discussion of the proposed program for the eighth annual Clinical conference to be held at Hotel Hollendon June 28,-July 2, 1954.

News and Comments

VA MEDICS READIED FOR BIG YEAR

With a bigger medical operation budget, the VA will put into use about 6,000 more hospital beds in 1954. On July 15, Vice Admiral Joel T. Boone, (MC) U.S. Navy Rtd., Chief Medical Director, Department of Medicine and Surgery, Veterans Administration, alerted all hospitals to get ready to do a bang-up job of increased care for "Vets." In his orders to hospitals "to get humming" Admiral Boone emphasized sharpening the care and understanding of the disease of the aged. Geriatrics (health problems of the aged) is worth special VA attention, because the veteran population is a fixed group that is growing older. VA doctors will handle geriatric cases in larger proportion than other MDs, and they should become leaders in geriatric medicine.

AWARDS COMMITTEE ANNOUNCEMENT

The Awards Committee will select two candidates for the John E. Davis Award and final selection for the award will be made by the Representative Assembly at its annual meeting to be held this year in Cleveland.

Names of candidates for Honorary or Life membership must be presented to the Awards Committee sixty days prior to the annual meeting.

The Awards Sub-Committee will function in each of its six geographical areas to orient the membership on the purpose this committee has in regard to the type of awards available, methods of selection, suggestions for additional awards, and the development of criteria for selection of candidates.

TREASURER ASSUMES DUTIES

The entire membership will be pleased to know that Mrs. Eleanor B. Stone, 24, Bodwell Terrace, Milburn, N.J., will assume the duties of Treasurer, relieving Mr. Louis F. Mantovano who has remained the faithful watch dog of the funds of the Association, during Mrs. Stone's recent illness and hospitalization.

We welcome Mrs. Stone back into the fold and wish her successful and satisfying "tour of duty."

SALT LAKE CITY V.A.H. MARKS FIRST YEAR OF OPERATION

The \$8,000,000 Fort Douglas Veterans Hospital at Salt Lake City, Utah, the most modern treatment center for veteran patients in the neurological, psychiatric, and TB-NP categories operated by the V.A., has recently marked its first year of operation and "has more than proved its usefulness" according to a recent report of the hospital administration.

The hospital, which has a capacity of 546 beds, is expected to be entirely filled by late December. It features a system of psychiatric units of twenty or thirty beds with each unit having its own lounge, doctor's office and dining rooms in which the patients eat at family-size tables rather than in the traditional mess hall. Most of the patients live in single or double rooms and none of the wards are constructed to accommodate more than sixteen patients.

The discharge rate at Salt Lake City is "appreciably higher" than that of older institutions according to Dr. Albert H. Fechner, manager, who attributed the hospital's success to the functional nature of its physical set-up and the efforts of hundreds of citizen volunteers.

Dr. Richard H. Anderson, chief of psychiatric services, discussing the use of the large swimming pool which was once assailed by critics as a "needless luxury" stated that it had replaced hydrotherapy for many patients since the water temperature of 88 degrees afforded relaxation as well as a chance to work off excess energy.

Residents of Salt Lake City, who were somewhat reluctant to accept the mental hospital at the city's eastern edge, have cooperated fully with the hospital administration and several local corporations such as the Freed Motor Company and the Kennecott Copper Corp. have donated materials for O.T. and M.A.T. activities.

NEW YORK CITY REOPENS EXAMINATION FOR CORRECTIVES INSTRUCTOR

The Municipal Civil Service Commission of the City of New York has re-opened examination for the position of Instructor, Corrective Physical Education. The position, which pays a starting salary of \$3,260 per year, requires a baccalaureate degree including or supplemented by a major in physical education or physical therapy, with courses in corrective and remedial exercises, physiology, kinesiology, and anatomy in addition to a minimum of 150 hours of clinical practice.

PHILLIPS GUEST INSTRUCTOR AT KANSAS UNIV.

A three day course for physicians and surgeons covering Physical Medicine and Orthopedics was offered at the University of Kansas Medical Center, Kansas City, Oct. 26-28 inclusive by the university in cooperation with the Kansas Medical Society.

Guest instructors at the sessions included Dr. Alexander Aitken, Professor of Clinical Orthopedic Surgery, Tufts College; Dr. Miland E. Knapp, Clinical Professor of Physical Medicine, University of Minnesota; Dr. Jesse T. Nicholson, Professor of Orthopedics, University of Pennsylvania; Dr. William D. Paul, Professor of Internal Medicine and Chairman, Division of Physical Medicine, Iowa State University; Dr. James L. Beaver of Wichita, Kans.; Dr. Walter P. Blount, Orthopedic Surgeon, Milwaukee, Wisc.; Mr. Edward Curry, Commissioner, Kansas Workman's Compensation Commission, Topeka; Mr. Lawrence Lowe, District Manager, Liberty Mutual Insurance Company, Kansas City, Mo. and Mr. Joseph J. Phillips, Chief Corrective Therapy, Wadsworth, Kans. Veterans Administration Center.

Mr. Phillips, an active member of the Association for Physical and Mental Rehabilitation, was a member of the panel on Amputation and Prostheses and spoke on "The Value of the Pylon as a Temporary Prosthesis."

SIDNEY L. TOABE IN EDINBURGH

Sidney L. Toabe writes: "I have just spent the last five days observing the Physiotherapy Departments work at the Royal Infirmary. Now the Royal Infirmary has a training school for physiotherapists, so they don't hire any remedial gymnasts. But other than the work or treatment by the use of modalities, their work consists of exercise therapy which is carried on by the corrective therapists in the VA Hospitals in the United States. I think, therefore, that their method of approach may be of great interest to many members of our organization.

"The Royal Infirmary of Edinburgh is a 1,000 bed hospital

which deals primarily with acute surgical cases of all types. The Physiotherapy Department has a staff of 15 therapists and they also use about 15 therapists in training third year students, to assist in their treatment program. This staff averages 700 patients a day for treatment. Approximately 400 patients, of a pre and post-surgical nature, receive 15 minutes of maintenance (conditioning) exercises every day. Then there are 300 out-patients coming for specific remedial exercises on a three-days-a-week basis. Other than treatment by use of the modalities, and a few patients receiving special exercise treatment, all treatment is carried out on a group basis.

"Out-patients come in for specific classes in group exercises, depending upon their disability. There are classes for exercises for surgical knees, feet, shoulders and back. The average treatment time in the classes runs from 15 minutes to a half hour. The out-patients are expected to carry out the same exercises at home on the days they do not go to the clinic.

"The in-patients, besides receiving maintenance exercises on a group basis, will also get individual instruction depending on the need. Most pre-operative cases will get individual instruction in breathing exercises.

The therapists work a 5½ hour day on a 6-day a week basis. The therapists work very hard to get through with 700 patients on a 5½ hour day. All the patients I observed were with the therapist to get full benefit and I'm sure they must be getting some satisfactory results. Next week I am going to work in a convalescent center.

You can count on an article from me about the Remedial Gymnast during the first week of December.

We wish Sidney success in his tour of duty and will be happy to receive his stories of the work of the Remedial Gymnasts in the British Isles.

NINTH ANNUAL "KICK OFF DINNER"

Under auspices of the American Federation of the Physically Handicapped, the 9th annual KICK-OFF DINNER, launching observance of "NATIONAL EMPLOY THE PHYSICALLY HANDICAPPED WEEK" was held Saturday, October 3, 7:00 P.M. National Press Club Auditorium.

Speakers included representatives of Government, Education, Industry, Labor and the Handicapped. Senator Harley M. Kilgore, Senate Sponsor of "NATIONAL EMPLOY THE PHYSICALLY HANDICAPPED WEEK" was the featured speaker. The program follows:

Harvey V. Highley, Administrator, Veterans Affairs, represented by Dr. A. B. C. Knudson, spoke on the varied phases of rehabilitation and employment of disabled veterans.

Robert C. Goodwin, Director, U. S. Bureau Employment Security illustrated how some 3,000,000 Handicapped have been placed in employment during the past 11 years.

Philip Young, Chairman, U. S. Civil Service Commission, outlined the Commission's program fostering employment of Handicapped.

A. J. Hayes, President, Int'l Ass'n of Machinists; Joseph E. Beirne, President, Communications Workers of America, and W. Anthony Boyle, President, District 27, United Mine Workers, presented Labor's views on employment of Handicapped.

Walter E. Ditmars, President, Gray Mfg. Co., Hartford Conn., presented an Industrialist's experience with Handicapped workers.

Paul A. Strachan, President, American Federation of the Physically Handicapped and author of "NATIONAL EMPLOY THE PHYSICALLY HANDICAPPED WEEK," outlined the continuing program.

Hon. Harley M. Kilgore, West Virginia, original Senate sponsor of "NATIONAL EMPLOY THE PHYSICALLY HANDICAPPED WEEK," presented the Congressional viewpoint.

The Collegiate Chorale, consisting of 40 girls from Marjorie Webster Junior College, under direction of Stephen Prussing, provided music.

Al Capp, famous Cartoonist, featuring "LI'L ABNER"—himself an amputee, entertained.

DISTINGUISHED SERVICE AWARD TO DR. RUSK

The American Legion Auxiliary, meeting in conjunction with the parent body at St. Louis, Aug. 31 to Sept. 3, voted its distinguished service award to Dr. Howard A. Rusk, Director of the Institute of Physical Medicine and Rehabilitation of the N.Y.U.-Bellvue Center, in recognition of his work and in behalf of disabled veterans at Bellevue.



HERBERT A. EVEREST RETIRES

The pioneer manufacturer of the folding type wheel chair has announced his retirement from active business, "to work with various handicapped groups trying to help solve the many problems which arise." This is typical of the determination to serve his fellow man, that has been characteristic of the career of Mr. Everest.

On May 29, 1953 Mr. Everest was awarded the Distinguished Achievement Medal by the Colorado School of Mines, Golden, Colorado. The citation reads as follows:

Herbert A. Everest

Engineer of Mines and Metallurgical Engineer

Class of 1908

Los Angeles, California

Mine examination and petroleum geology consulting work occupied his time after graduation from Mines. As a result of an accident, he was unable to continue with engineering work and thus began to turn his attention to the rehabilitation and employment of the physically handicapped. He has been awarded the Presidential Citation for his work in this field and is well known for the development and manufacture of metal folding chairs and invalid equipment. The Distinguished Achievement Award is being made in absentia.

Mr. Everest has been a loyal contributor to this Association. He was one of the original advertisers who recognized our Association as an important ancillary therapy in assisting the medical profession in the rehabilitation of the handicapped. We wish him many more years of service to the handicapped in his retirement.

NERVE REGENERATION IN ANIMALS PRODUCED EXPERIMENTALLY

A new method by which the spinal cords of animals have been severed and subsequently made to regenerate nerve tissue across the spinal gap was described at the recent congress of the United States and Canadian sections of the International College of Surgeons. The report was presented before the section on neurosurgery by Dr. William W. Chambers, Associate Professor of Anatomy at the University of Pennsylvania School of Medicine who stated that the primary deterrent to nerve regeneration in the laboratory animals he has studied was the formation of huge masses of scar tissue over the end of the severed cord. This scar tissue acts as an "insulator" to prevent nerve fibers and connective tissues from re-joining.

When Pyromen, a bacterial extract which stimulates the production of white blood cells and loose connective tissue, is injected into the animals, the drug appears to prevent the formation of scar tissue on the ends of the severed cord and a loose matrix of white cells and connective tissues forms instead of the scar tissue. In laboratory animals that survived twenty days or more, nerve fibers were found growing across the spinal gap.

The source of the regenerated fibers into the loose matrix was three-fold. One group of intrinsic spinal cord neurons traversed the region of the cord section; another group of fibers followed branches of the spinal arteries while a third group of small bundles of severed or injured dorsal and ventral spinal root fibers grew into the matrix.

Dr. Chambers and his associates, all members of the Pennsylvania Anatomy Department, emphasized that their results applied only to the lower animals and that in no case was it possible for the specimens to regain use of the lower motor functions. There was no implication that it will ever be possible to treat a severed spinal cord in a human so that it will knit, but the investigators urged that the wider study of the regrowth of organs in laboratory animals that have the power to grow new limbs at will might yield the answer to the problem of the human paraplegic.

EXPANDED M. S. RESEARCH REVEALS LARGE AMOUNTS OF CYANIDE PRESENT

In a recent study of the University of Rochester it has been reported that cyanide has been found in unusually large quantities in the systems of patients with multiple sclerosis. Since this condition is known to exist among heavy smokers, further research is necessary to determine if the compound responsible for cyanide absorption is the same for heavy smokers and M. S. patients alike.

During these experiments a puzzling phenomenon occurred. The tests showed that the amount of cyanide present in summer and spring was greater than that which was present in the winter months. A questionnaire was sent to 200 members of the Rochester Chapter of the National Multiple Sclerosis Society to ascertain if there were any connection between the seasons and the number of onsets of the disease and exacerbations. It was found that no significant seasonal variations were present which might explain the seasonal changes in cyanide. Despite these negative findings there is a possibility that the presence of cyanide may provide a clue to the cause of this baffling disease.

REHABILITATION SEEN AS SAVING MILLIONS

Rehabilitation of America's tens of thousands of disabled persons, though costly in services and money, not only can return these people to productive satisfying lives but will save millions in public funds.

Figures showing the vast economies that can be achieved through application of modern methods of rehabilitation are cited by Mary E. Switzer and Howard A. Rusk in a 25-cent pamphlet *DOING SOMETHING FOR THE DISABLED* published by the Public Affairs Committee, New York.

From estimates by responsible organizations, the authors indicate the extent of disabling conditions among our citizens: 260,000 blind; 2,000,000 diabetic; 500,000 tubercular; 200,000 amputees; 50,000 to 100,000 multiple sclerotic and 750,000 epileptic, with 10,500 new cases of cerebral palsy appearing each year. In 1952, 57,026 new cases of polio were recorded. "This is only part of the picture" emphasize the authors, the

total would "number into the millions. Not all of them can be rehabilitated. But there are at least 2,000,000 disabled who can be rehabilitated. . . ." The statistics given in the following table, were taken from a recent study of public assistance cases, rehabilitated through the State-Federal Program of Vocational Rehabilitation, during the year which ended June 30, 1951.

Persons rehabilitated during the year	\$ 66,000
Number receiving public assistance	8,000
Annual assistance payments totaled	5,700,000
As rehabilitated, working members first earnings were estimated at	14,000,000
Expenditure to rehabilitate	4,000,000
Annual income tax paid by group	1,000,000

(Cost of rehabilitation for the group was less than three-fourths of cost to maintain them.) "The success of handicapped workers rests on two principles: first, they must be properly prepared—physically, vocationally and otherwise—for the job they will do" because "he still will be confronted with the employer's question: 'What kind of work can you do?'. The authors list the second key to success as being "selective placement." Examples are cited where the person with a certain physical impairment may indeed be better fitted for certain tasks than the so-called normal individual.

"Whenever organized programs for placing the disabled have been launched, the experience has confirmed the belief that handicapped workers can be hired with just as much confidence and success as any other group of workers with no impairment," they add.

"The greatest single obstacle to the more rapid development of all types of rehabilitation services," they continue, "is the shortage of trained personnel."

"Although the number of physicians receiving specialized training in physical medicine and rehabilitation has increased by ten times since before World War II, the supply still falls far short of meeting the needs. The need for physical therapists, occupational therapists, speech and hearing therapists, vocational counselors, social workers, and other specialists is even greater."

"Because of this question of disability, and the burden that it imposes in terms of dollars and human misery, is common to every community." "The logical starting place," the authors contend, "must be the cities, towns, and villages throughout the country . . . State and national planning is of little value unless it bears fruit in the form of action in the communities across the land."

"When our friends, neighbors, and colleagues acquire insight into the problem of disability, when they realize that a rehabilitation program will reduce the drain on municipal funds, community action will follow."

"The handicapped people of our country," the authors conclude, "ask no more than the opportunity to compete on an equal basis for the privilege of living in a democratic society."

This 25c pamphlet *"DOING SOMETHING FOR THE DISABLED"* may be purchased by writing: Public Affairs Committee, 22 E. 38th Street, New York City.

MEETINGS OF PROFESSIONAL INTEREST

November 13-20	36th Annual Conference of the American Occupational Therapy Association, Houston, Tex.
November 15-18	National Conference on Driver Education, NEA Commission on Safety Education, East Lansing, Mich.
December 28-30	Annual Convention, Speech Association of America, NEA, New York City.
February 11-13	Annual Meeting, American Association of Colleges for Teacher Education, Chicago.
February 24-26	Southern District Convention, AAHPER, Biloxi, Miss.
March 29-April 1	Midwest District Convention, AAHPER, Indianapolis, Ind.
March 31-April 3	Southwest District Convention, AAHPER, Tucson, Ariz.
April 3-10	Northwest District Convention, AAHPER, Eugene, Ore.

SELECTED BIBLIOGRAPHY PARAPLEGIC REHABILITATION

(Continued from Vol. 7, No. 5)

- Munro, Donald. Rehabilitation of patients totally paralyzed below waist, with special reference to making them ambulatory and capable of earning their own living; control of urination. *New England Journal of Medicine* 234:207-216 Feb. 14, 1946.
- Munro, Donald. Rehabilitation of patients totally paralyzed below waist, with special reference to making them ambulatory and capable of earning their own living tidal drainage, cystometry and bladder training. *New England Journal of Medicine* 236:223-235 Feb. 13, 1947.
- Munro, Donald. Rehabilitation of veterans paralyzed as result of injury to spinal cord and cauda equina. *American Journal of Surgery* 75:3-18 Jan. 1949.
- Newman, L. B. Rehabilitation of patients with spinal cord injuries. *Archives of Physical Medicine* 28:85-93. Feb. 1947.
- Perram, N. S. Use of physiotherapy in the rehabilitation of a paraplegic. *Canadian Journal of Occupational Therapy* 17:48-50 June 1950.
- Petroff, B. P. and Yarosh, Michael. Physical reconditioning in paraplegic patients. *Archives of Physical Medicine* 28:34-38 Jan. 1947.
- Pieloch, C. R. and Sagath, B. E. Spinal cord injuries and the Stryker frame. *American Journal of Nursing* 45:369-370 May 1945.
- Poer, D. H. Daily care of the paralyzed patient. *Journal of the American Medical Association* 129:162-163 Sept. 8, 1945.
- Pollock, L. J. and others. Management of residuals of injuries to spinal cord and cauda equina. *Journal of the American Medical Association* 146:1551-1563 Aug. 25, 1951.
- Progress in the care of paraplegics. *Bulletin of the U.S. Army Medical Department* 5:491-492 May 1946.
- Riviere, Maya. Rehabilitation of the handicapped: a bibliography, 1940-1946. New York, National Council on Rehabilitation, 1949. 2 vol.
- Rogers, Eric. The care of paraplegic patients in general hospitals. *Canadian Medical Association Journal* 59:338-343 Oct. 1948.
- Rood, M. S. Program for paraplegics. *American Journal of Occupational Therapy* 1:22-25 Feb. 1947.
- Rusk, H. A. Implications for nursing in rehabilitation. *American Journal of Nursing* 48:74-76 Feb. 1948.
- Rusk, H. A. and Taylor, E. J. Rehabilitation. *Annals of the American Academy of Political and Social Science* 273:138-143 Jan. 1951.
- Sanders, E. M. Mobilization of paraplegics; the early stage. *Occupational Therapy and Rehabilitation* 27:353-370 Oct. 1948.
- Sanders, E. M. Mobilization of paraplegics; wheel chair and mat exercises. *Occupational Therapy and Rehabilitation* 28:340-363 Aug. 1949.
- Sanders, E. M. Mobilization of Paraplegics; Crutch Ambulation. *Occupational Therapy and Rehabilitation* 30:61-90 April 1951.
- Sandifer, P. H. and Guttman, Ludwig. Early treatment of traumatic paraplegia. *Middlesex Hospital Journal* 44:67-70 Dec. 1944.
- Saxton, Lois and Bailey, Gwen. Post-traumatic "cord" paralysis; role of physical therapy in rehabilitation. *Physiotherapy Review* 27:283-286 Sept.-Oct. 1947.
- Sensenich, Helen. Team work in rehabilitation. *American Journal of Public Health* 40:969-972 Aug. 1950.
- Shear, H. R. and Comarr, A. E. Eating devices for the paraplegic patient. *Occupational Therapy and Rehabilitation* 28:154-158 April 1949.
- Shear, H. R. and Comarr, A. E. An exercise glove for quadriplegics. *Archives of Physical Medicine* 30:453 July 1949.
- Sippy, H. I. Care of paraplegic patients from viewpoint of internal medicine. *Archives of Physical Medicine* 29:715-718 Nov. 1948.
- Soden, W. H., ed. Rehabilitation of the handicapped. New York, Ronald Press, 1949. 399p.
- Street, D. M. Treatment and rehabilitation of the paraplegic. *American Journal of Surgery* 80:722-726 Nov. 15, 1950.
- Thompson, G. J. and others. Treatment of paraplegic; observations in series of 101 cases. *Journal of Urology* 57:1085-1096 June 1947.
- U. S. Veterans Administration. Pamphlet 10-10: What's my score? Handbook for patients with disabilities resulting from spinal cord injuries. 1946. 36p.
- U. S. Veterans Administration. Technical bulletin TB 10A-110: Equipment for paraplegic patients. Jan. 14, 1948. 1p.
- U. S. Veterans Administration. Technical bulletin TB 10A-1: Procedures and techniques for corrective physical rehabilitation of patients with spinal cord injuries. Aug. 26, 1946. 3p.
- Wakim, K. G. and others. The effects of therapeutic exercise on the peripheral circulation of normal and paraplegic individuals. *Archives of Physical Medicine* 30:86-95, Feb. 1949.
- Watkins, A. L. Medical progress; physical medicine in rehabilitation. *New England Journal of Medicine* 232:191-195, Feb. 15, 1945.
- Waugh, W. S. Care and mobilization of paraplegics. *Postgraduate Medicine* 1:424-429, June 1947.

*It's a Thrill for them
to drive again with the*

HUGHES HAND DRIVING CONTROL

When you buy the Hughes Hand Driving Control you not only buy the simplest, most efficient and economical hand driving control manufactured—you also buy one that has been thoroughly tested by paraplegics under actual driving conditions. No expense has been spared to make this the safest hand driving control possible. Paraplegics themselves have thoroughly tested the Hughes Hand Driving Control with thousands of actual driving miles in a single year.

Write us direct for Prices and Literature

HUGHES HAND CONTROL AGENCY

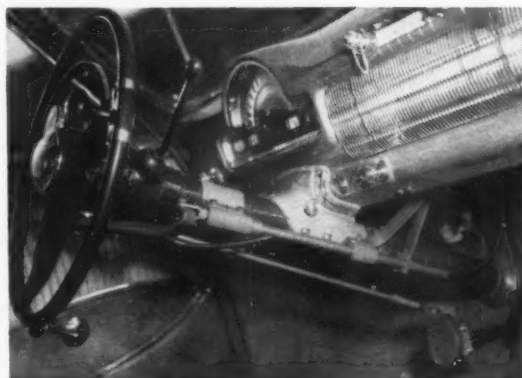
Distributor

Tevis Bridge Road

Lexington, Missouri

P. O. Box 204

Clinton, Iowa



Typical Installation of Hughes Hand Driving Control

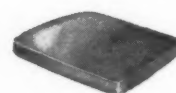
Check these Features

- ✓ Fits any automatic or semi-automatic transmission.
- ✓ In no way precludes normal operation of car so equipped by non-handicapped person.
- ✓ Easily transferred from one car to another by using conversion kit.
- ✓ Only one control handle for gas, brake and dimmer switch.



Plastic Cover
(Removable)

SANIGLASTIC FOAM RUBBER Wheel Chair Cushions



Grey Sail Cloth Cover
(Removable)

- | | | |
|-----|---|------------|
| 4" | Thick and buoyant, cured foam rubber, 16 x 16 covered with white Saniglastic #123 plastic or grey sail cloth | \$9.90 ea. |
| 3" | Two pieces 1½" solid foam rubber cemented together. Compact and Comfort plus. Same covering and size as above | \$8.50 ea. |
| 2" | Solid for comfort but supports less weight than above. Covering and size the same | \$6.50 ea. |
| 1½" | For light duty. Same size and covering | \$5.50 ea. |

Prices furnished on request.

All Prices FOB—So. Milwaukee, Wisconsin

SANIGLASTIC, INC., 805 Madison, South Milwaukee, Wisconsin



A Complete Line of Equipment

PRESTON for PHYSICAL MEDICINE AND REHABILITATION

Our New 1954 Catalog

HAS JUST COME OFF THE PRESS

As has been our policy in past years, we are again providing a great variety and even wider selection in all types of equipment and accessories.

Listing over 1100 articles the catalog includes a number of new sections such as Equipment for Cerebral Palsy, Speech Therapy, Self-Help Devices, Hospital Beds. The other sections have been greatly expanded and brought up to date. To mention a few of the additions: The Guthrie Smith Suspension Apparatus; "Flexerciser," a new exercise unit for bed and ambulatory patients; Exercise Skates and Powder Boards; Dr. Bunnell's Active Hand & Finger Splints; Shoulder Wheel with height adjustment; an extra wide selection of Parallel Bars, Exercise Staircases, Treatment Tables, Invalid Walkers and Sayre Headlings; Standing Tables & Beds; Rocking Beds; and many others. It is our hope that the new catalog will serve you well as a useful guide in selecting your equipment and accessories.

Please send for your free copy

**ALL your needs supplied
by ONE reliable source**

J. A. PRESTON CORP.

175 FIFTH AVENUE, NEW YORK 10, N. Y.

DOORWAY GYM BAR



Instantly installed in doorway by expansion. No nails or screws. Exercises included. Very highly recommended by physical educators.

Write for particulars to

OLYMPIAN INDUSTRIES

4720 N. Kilpatrick Ave., Chicago 30, Ill.

PHYSICAL MEDICINE VACANCIES

Physical Therapists: 40-GS-5; 2-GS-6; 21-GS-7; 1-GS-8; 1-GS-9

Occupational Therapists: 37-GS-5; 4-GS-6; 25-GS-7; 1-GS-8; 1-GS-9

Manual Arts Therapists: 6-GS-5; 1-GS-7

Educational Therapists: 5-GS-5; 4-GS-7; 1-GS-8

Corrective Therapists: 16-GS-5; 4-GS-7

Enjoy Living, Through

HAND CONTROLS!



The above hand controls can be used by quadriplegics, as well as paraplegics. This photograph shows the various positions of these "one lever" controls in operation. (One lever controls the gas and brake . . . controls may be mounted either left, or right hand.)

Price \$79.00 Post Paid
(No C.O.D. Please)

Become independent . . . ANY CAR can be equipped with handicap hand controls . . . Controls built with your budget in mind. **MANUFACTURED BY THE HANDICAPPED FOR THE HANDICAPPED . . .** Obtain this easy way freedom you never thought possible . . . If you have any question or particular problem merely writing a short note to the manufacturer will bring a prompt and courteous answer, along with an illustrated brochure.

handicap PRODUCTION

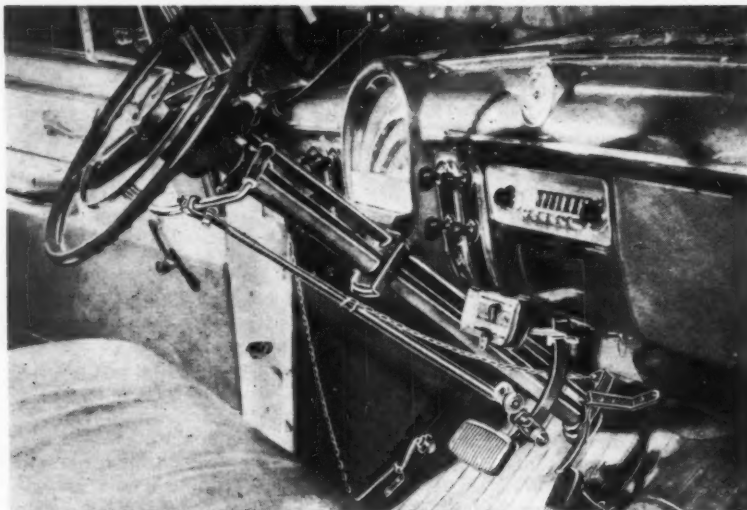


1543 Cota Avenue • Long Beach, Calif. • Phone 69-5125

Ours
Will Operate
A Standard Shift
With Only One Lever

ARNOLD-HAND CONTROLS

All
Arnold
Controls Give A
Car-Life Guarantee



Easily Installed By Any Mechanic By Using Pictured Instructions—Pencil-Like Lever (Pull-to-Go—Push-To-Stop) Operates Entire Car.

Arnold DEVICES, INC.

310 East 34 Street — New York 16, N. Y.

Opp. Queens Midtown Tunnel — LEXington 2-5989—6294

WHEEL CHAIRS—HOSPITAL EQUIPMENT SALES & SERVICE—AMBULANCE AND OXYGEN SERVICE
RAVenswood 9-3398

Association for Physical
and Mental Rehabilitation

MEMBERSHIP APPLICATION

Mail to Leslie Root, 4025 N. 124th St.
Milwaukee 10, Wisconsin

Enclosed please find (check one)

- ☐ \$10.00 for my Active Membership
☐ \$ 5.00 for my Professional Membership
☐ \$ 4.00 for my Associate Membership

Name..... Date.....
(Print or Type)

Home Address.....
(Street) (City) (State)

Proposed by..... Signature.....
Address.....

Position Title..... Location.....
Education.....
(College) (Major) (Degrees)

(Degree with major in Physical Education required)
Training and/or experience in Physical and/or Medical Rehabilitation includes:
(One year under the direct supervision of a Medical Doctor required)

Professional

I received my..... degree or certificate from.....
(cross out one) (name of college, university, institution)

I am..... Location.....
(List your profession related to rehabilitation, such as physician, nurse, clinical psychologist, speech therapist, physical educator, sports technician, social worker, vocational advisor, etc.)

I have a special interest in rehabilitation because.....

Associate

I am employed at.....
(list your position) (location)

I have a special interest in rehabilitation because.....

Subject Index

The Table of Contents originally prepared by Sam Boruchov and Ruth H. Cornelius appeared in Vol. 4, No. 9 of this Journal, The Cumulative Subject Author Index which appeared in Vol. 5, No. 6, and the Index appearing in this issue, was prepared by Richard F. Smotherman, Production Editor, and Paul B. Bell and James P. Callahan, Associate Editors. The Index in this issue lists Authors and Articles which have been cross-referenced by related subjects. Book Reviews and Abstracts have been added, but not cross-referenced. Abstracts head the list, followed by Articles, with Book Reviews completing the list. See p. 232 for Author Index.

ABSTRACTS

-A-

Aged: The Ranges of Chronic Inactivity in the (Hill, M.) 7:156, July, 1953.

Amputees: Some Psychological Findings in the Rehabilitation of (Manson, M. P. and Devins, G. V.) 7:88, May, 1953.

Athletes: Nutrition of (Upjohn, H. L. and Shea, J. A. and Stare, F. J. and Little, L.) 7:139, July, 1953.

Athletes: Intolerance of, to Infection (Ficara, B.) 6:21, Sept. 1952.

Athletics: The Trauma of (Thorndike, A.) 6:21, Sept. 1952.

-B-

Bacteria, Bombs, and Bullets (Reid, R. D.) 7:139, July, 1953.

Back, Lame: Some Common Causes and Conservative Treatment (Ober, R.) 6:21, Sept. 1952.

Blood Clotting and Thrombosis (Copley, A. L.) 7:54, Mar. 1953.

Boxing, The Occupational Hazards of—Medical Recommendations for Control (Ferland, F. R.) 7:146, July, 1953.

Brain, The: A Master coordinator (Hoff, E. C.) 7:183, Sept. 1953.

-C-

Cardiovascular System: Smoking and the (Editorial, J.A.M.A.) 7:21, Jan. 1953.

Cerebral Palsy Program: General Management of the (Phelps, W. M.) 7:21, Jan. 1953.

Cocontraction and Reciprocal Innervation in Voluntary Movement in Man (Levine, M. G. and Kabat, H.) 7:54, Mar. 1953.

Combat Stress: Front-Line Studies of (Pace, N.) 7:183, Sept. 1953.

Common Cold: Treatment of the (Cooke, W. T.) 5:27, July, 1952.

Competitive Endurance Performance: Comparison of Effects of Certain Blood Alkalizers and Glucose Upon (Johnson, W. R. and Black, D. H.) 7:183, Sept. 1953.

Corrective Therapy: The Adolescence of (Davis, J. E.) 7:139, July, 1953.

-D-

Dance Mime: A Contribution to Treatment in Psychiatry (Bainbridge, G. et. al.) 7:219, Nov. 1953.

Disciplinary Roles: Can We Define (Ozarin, L. D.) 7:22, Jan. 1953.

-E-

Exercise: Therapeutic Physical, The Physiological Aspects of (Wakim, K. G.) 6:18, Nov. 1952.

Exercise of Executives with Relationships to Health and Working Efficiency (Cureton, T. K.) 7:219, Nov. 1953.

Exercises: Practical Applications of Progressive Resistance (Watkins, L.) 6:21, Sept. 1952.

-F-

Fatigue: Ergonomics Research Society's Symposium (Edholm, O. G. and Floyd, W. F.) 7:21, Jan. 1953.

Fatigue: Research on (Frayser, D. C.) 7:183, Sept. 1953.

-G-

Gait: Normal and Pathological, Major Determinants in (Saunders, J. B., De C. M., Inman, V. T. and Eberhart, H. D.) 7:219, Nov. 1953.

-H-

Handicapped: The Neurologically, Observations on the Rehabilitation of (Schlesinger, E. B.) 7:21, Jan. 1953.

Heart Disease: Restrictions in (Editorial, The Lancet) 7:146, July, 1953.

-I-

Illness, Chronic: and Senescence (Stieglitz, E. J.) 7:53, Mar. 1953.

Illness, Chronic: Physical Medicine and (Kent, 6:21, Sept. 1952.

Insulin Patients: An Activity Program for (VA Information Bulletin 1-29) 7:138, July, 1953.

-M-

Movement, Human: The Human Body and the Significance of (Van Den Berg, J. H.) 7:183, Sept. 1953.

Muscle Activity: Patterns of, in Posture and Movement (Floyd, W. F. and Silver, P.H.S.) 5:27, July, 1952.

Muscle Contraction, Skeletal: Fundamental Mechanics of (Sandow, A.) 7:53, Mar. 1953.

Muscle, Skeletal: The Question of Tonus in (Ralston, H. J. and Libet, B.) 7:219, Nov. 1953.

Muscular Dystrophy: The Enigma (Newsweek) 5:26, July, 1952.

-N-

Neurosis: The Modern Primitive—A Fresh Approach to (Harper, R. M. J.) 5:26, July, 1952.

Nutrition: Endurance and (Ershoff, B. F.) 7:22, Jan. 1953.

-O-

Oxygen Uptake of Human Cerebral Cortex Slices and the Effects of Some Inhibitors (Elliott, H. W. and Sutherland, V. C.) 7:183, Sept. 1953.

-P-

Pain Mechanisms: A Review (Ash, W. H.) 7:53, Mar. 1953.

Paper: How to Plan a (Research Com-

mittee, AART) 7:139, July, 1953.

Physical Education: Committee on Adapted, (Journal AAHPER) 5:26, July, 1952.

Physical Medicine and Chronic Illness (Kent, H.) 6:21, Sept. 1952.

Posture: Orthograms of (Goff, C. W.) 7:22, Jan. 1953.

Posture: The Upright (Straus, E. W.) 7:54, Mar. 1953.

Prosthesis: A Temporary, or Amputation of the Lower Extremity (Thompson, J. E. M. and Zimmer, H.) 7:1, Jan. 1953.

Prosthesis: A Temporary, for Amputations of the Lower Extremity (Thompson, J. E. M. and Zinnem, H.) 5:26, July, 1952.

-R-

Rehabilitation: Toward a Concept of (Talbot, H. S.) 7:87, May, 1953.

-S-

Skill, Human: The Analysis of (Oldfield, R. C.) 7:139, July, 1953.

Sleep: The Effect of, Prior to Learning (Worchel, P. and Marks, M.) 6:21, Sept. 1952.

-T-

They Work Again (Newsweek) 6:21, Sept. 1952.

Thrombosis: Blood Clotting and (Copley, A. L.) 7:54, Mar. 1953.

Treatment; Intensive, of Back-Ward Patients—A Controlled Pilot Study (Galloni, E. P., Adams, F. H. and Tallman, F. F.) 7:219, Nov. 1953.

-V-

Ventricular Tachycardia, Paroxysmal: Due to Emotion (Harvey, W. P. and Levine, S. A.) 7:54, Mar. 1953.

-W-

Weight Training: The Effect of, on Physique (Tanner, J. M.) 7:219, Nov. 1953.

Wounds: The Healing of (Schilling, J. A.) 6:24, Nov. 1952.

Writers: Do's and Don'ts for (Research Committee, AART) 7:139, July, 1953.

ARTICLES

-A-

ACHIEVEMENTS:

Highlights of the Sixth Annual Convention of the Association (Davis, J. E.) 6:3, Sept. 1952.

The Washington Convention (Wessel, R. H.) 7:155, Sept. 1953.

AMBULATION

Ambulation, the Hack Self-Reliant Walker: An Improved and Tested Aid in (Devins, G. V. and Nyquist, R. H.) 6:13, Nov. 1952.

Gait Training, An Audio-Visual Aid to (Painter, C. W.) 7:132, July, 1953.
Treatment of Patients with Lower Extremity Amputations, A Guide for the Corrective Therapist in the (Fleer, P. F.) 5:12, July, 1952.

The Amputee Gait Clinic—A Team Approach (Moore, W. H., Keys, J. J. and Psaki, R. C.) 7:180, Sept. 1953.

AMPUTATION:

Amputations, Lower Extremity, A Guide for the Corrective Therapist in the Treatment of Patients with (Fleer, P. F.) 5:12, 1952.

The Amputee Gait Clinic—A Team Approach (Moore, W. H., Keys, J. J. and Psaki, R. C.) 7:180, 1953.

APHASIA:

Aphasic Patients, Factors Related to the Restoration of Language Function in (Eisensohn, J. and Morrow, R. S.) 7:84, May, 1953.

—B—

BACK:

Back Pain, Low, Prevention of (Kraus, H.) 6:12, Sept. 1952.

Chronic Low Back Pain, Corrective Exercises for, and Postoperative Ruptured Intervertebral Discs (Wilbur, E. A.) 7:123, July, 1953.

BRACING:

A Guide for the Corrective Therapist in the Treatment of Patients with Lower Extremity Amputation (Fleer, P. F.) 5:12, July, 1953.

The Amputee Gait Clinic—A Team Approach (Moore, W. H., Keys, J. J. and Psaki, R. C.) 7:180, Sept. 1953.

—D—

DEVICES:

An Audio-Visual Aid to Gait Training (Painter, C.) 7:132, July, 1953.

Automobile Driving for the Severely Disabled (Rowley, T. J.) 7:175, Sept. 1953.

Hand Dynamometer Guard (John, R.) 7:210, Nov. 1953.

Handle Bar, Bicycle, An Adapted (Devins, G. V. and Anderson, D.) 7:76, May, 1953.

"Leg Press" as an Aid in Regaining Muscle Power (Jahn, R. and Nyquist, R. H.) 7:127, July, 1953.

Quadriceps "Shoe" Boots (Jahn, R. and Nyquist, R. H.) 7:17, Jan. 1953.

Walker, The Hack Self-Reliant: An Improved and Tested Aid in Ambulation (Devins, G. V. and Nyquist, R. H.) 6:13, Nov. 1952.

Weight Rack, A Practical (Wilhite, C. E.) 7:82, May, 1953.

—E—

EDUCATION:

Basic Preparation of Corrective Therapists, Adapted Therapy (Burnett, L. R.) 5:23, July, 1953.

Corrective Therapy in the General Hospital: Some Principles, Some Problems and Some Proposals (McCoy, C. H.) 7:114, July, 1953.

Educating our Handicapped Youth, The Total Approach in (Rudd, J. L.) 6:10, Sept. 1952.

Education, Corrective Physical, Practice in the Public Schools of Pennsylvania (Gross, E. H.) 7:36, Mar. 1953.

Education, Physical, and Recreation: a Graduate Program at Springfield College (Williams, H. E.) 7:120, July, 1953.

Education, Schools of Physical, and the Training of Physical Medicine and Rehabilitation Specialists (Clarke, H. H.) 7:44, Mar. 1953.

Educational and Professional Background of the Corrective Therapist, Preliminary Survey and Analysis of the (Mantovano, L. F.) 7:35, Mar. 1953.

EXERCISE:

Bilateral Quadriceps Strength as Related to Good and Bad Standing Posture, Research: Comparison of (Klein, K. K.) 6:16, Sept. 1952.

Conditioning Program for Sedentary Men (Morehouse, L. E.) 7:39, Mar. 1953.

Corrective Therapy in the Surgical Knee (Robertson, T. S. and Hawk, J. M.) 6:7, Sept. 1952.

Exercise and Activity, the Prescription of (Fowlks, E. W.) 7:71, May, 1953.

Exercises, Corrective, For Chronic Low Back Pain and Postoperative Ruptured Intervertebral Discs (Wilbur, E. H.) 7:123, July, 1953.

Exercise Program For Several Disabled Patients (Pastor, P. J.) 7:215, Nov. 1953.

Progressive Resistance Exercises for Quadriceps Development, A Method of Determining the Maximum Load for Ten Repetitions: Research (Klein, K. K. and Johnson, E.) 7:130, July, 1953.

—K—

KNEE:

Knee, Surgical, Corrective Therapy in the (Robertson, T. S. and Hawk, J. M.) 6:7, Sept. 1952.

—N—

NEUROPSYCHIATRY:

Catatonic Defense, Behind the (Jenkins, R. L.) 7:201, Nov. 1953.

Catatonic Patient, The Problem of the (Tompkins, H. J.) 7:199, Nov. 1953.

Mental Patients, An Experiment in Evaluation of Treatment in Rehabilitation of (Francis, R. L. and Clark, W. A.) 7:170, Sept. 1953.

Neuropsychiatric Hospital, Some Psychological Aspects of Therapeutic Activity in a (Rasch, P. J. and Brenner, H. J.) 6:15, Nov. 1952.

Neuropsychiatric Patients, Educational Therapy for (Van Schoick, J. H.) 7:14, Jan. 1953.

Psychiatric Treatment, Corrective Therapy in (Quamme, H. J.) 7:136, July, 1953.

Psychotic Patient, The Application of Activity Therapy for the Chronic, Regressed (Marusak, F. M.) 7:205, Nov. 1953.

NEURO-SURGERY:

Neuro-Surgery, the Role of, in Rehabilitation of the Paraplegic Patient (Scheibert, C. D.) 7:74, May, 1953.

—O—

ORTHOPEDICS:

Low Back Pain, Prevention of (Kraus, H.) 6:12, Sept. 1952.

Lower Extremity Amputations, A Guide for the Corrective Therapist in the Treatment of Patients with (Fleer, P. F.) 5:12, July, 1952.

Surgical Knee, Corrective Therapy in the (Robertson, T. S. and Hawk, J. M.) 6:7, Sept. 1952.

—P—

PALSY:

Palsy, Brachial Birth, A Practical Approach to the Treatment of (Schweitzer, F.) 7:77, May, 1953.

PARAPLEGIA:

Paraplegia, Neuropsychiatric Aspects of (Millen, F. J.) 7:68, May, 1953.

Paraplegic Patient, The Role of Neurosurgery in Rehabilitation of the Scheibert, C. D.) 7:74, May, 1953.

Rehabilitation Potentials in Spinal Cord and Cauda Equina Injuries (Newman, L. B.) 7:67, May, 1953.

The Prescription of Exercise and Activity (Fowlks, E. W.) 7:71, May, 1953.

PHYSICAL EDUCATION:

Physical Education and Recreation: A Graduate Program at Springfield College (Williams, H. E.) 7:120, July, 1953.

Physical Education, School of, and the Training of Physical Medicine and Rehabilitation Specialists (Clarke, H. H.) 7:44, Mar. 1953.

PHYSICAL MEDICINE:

Physical Medicine Rehabilitation, The Importance of, to the Medical Profession (Griffith, J. C.) 6:3, Nov. 1952.

POSTURE:

Posture, Research: Comparison of Bilateral Quadriceps Strength as Related to Good and Bad Standing (Klein, K. K.) 6:16, Sept. 1952.

PSYCHOLOGY:

Emotional Components and Concomitants in Pulmonary Tuberculosis (Levin, A. R.) 7:211, Nov. 1953.

Psychology, Necessity for Clear Communications Between, and Other Disciplines and Professions Engaged in Rehabilitation (Hildreth, H.) 7:48, Mar. 1953.

Psychological Aspects of Therapeutic Activity in a Neurochiatic Hospital, Some (Rasch, P. J. and Brenner, H. S.) 6:15, Nov. 1952.

Psychological Contributions to Varieties of Rehabilitation Processes, Specific (Pennington, L. A.) 7:12, Jan. 1953.

—R—

RECONDITIONING:

Muscle Power, "Leg Press" as an Aid in Regaining (Jahn, R. and Nyquist, R. H.) 7:127, July, 1953.

RECREATION:

"Hoop Bird" An Adapted Sport (Lerman, N. and Weber, B.) 6:18, Sept. 1952.

Recreation, Physical Education and; A Graduate Program at Springfield College (Williams, H. E.) 7:120, July, 1953.

REHABILITATION:

Corrective Therapy in the Surgical Knee (Robertson, T. S. and Hawk, J. M.) 6:7, Sept. 1952.

Physically Handicapped Youth, The Total Approach in Educating Our (Rudd, J. L.) 6:10, Sept. 1952.

Rehabilitation, Basic Concepts, Excerpts from Panel (Piaskoski, R., Mahoney, F. I. and Steinberg, D. L., Holsoapple, J. Q. Towne, M. and Edman, L. E.) 6:4, Nov. 1952.

Rehabilitation: Integrating Science and Service (Boone, J. C.) 7:166, Sept. 1953.

Rehabilitation, Necessity for Clear Communication Between Psychology and Other Disciplines and Professions Engaged in (Hildreth, H.) 7:48, Mar. 1953.

Rehabilitation Process, The Team Approach to the (Balsam, F. J.) 7:18, Jan. 1953.

Treatment of Patients with Lower Extremity Amputations, A Guide for the Corrective Therapist in the (Fleer, P. F.) 5:12, July, 1952.

RELAXATION:

Relaxation in Disease and Disability, An Orientation (Kuitert, J. H. and Templer, R. C.) 7:3, Jan. 1953.

RESEARCH:

Evaluation of Treatment in Rehabilitation of Mental Patients, An Experiment in (Francis, R. L. and Clark, W. A.) 7:170, Sept. 1953.

Observations, Muscular Strength-Endurance, From Single-Bout Ergography (Clarke, H. H.) 7:8, Jan. 1953.

Research: A Method of Determining the Maximum Load, For Ten Repetitions, In Progressive Resistive Exercises for Quadriceps Development (Klein, K. K. and Johnson, E.) 7:130, July, 1953.

Research: Comparison of Bilateral Quadriceps Strength as Related to good and Bad Standing Posture (Klein, K. K.) 6:16, Sept. 1952.

-S-

SHOULDER:

Shoulder Girdle, The Painful (Lefkovits, A.) 7:168, Sept. 1953.

STANDARDS:

Standards, Classification, Civil Service, for Corrective Therapists (Webster, R.) 7:50, Mar. 1953.

SURVEY:

Survey, Preliminary, and Analysis of the Educational and Professional Background of the Corrective Therapist (Mantovano, L. F.) 7:35, Mar. 1953.

-T-

THERAPY:

The Modern Meaning of the "Total Push" Concept (Pauncz, A.) 7:134, July, 1953.

Therapy, Adapted, Basic Preparation of Corrective Therapists (Burnett, L. R.) 5:23, July, 1952.

Therapy, Corrective, in Psychiatric Treatment (Quamme, H. J.) 7:136, July, 1953.

Therapy, Educational, for Neuropsychiatric Patients (Van Schoick, J. H.) 7:14, Jan. 1953.

The Painful Shoulder Girdle (Lefkovits, A.) 7:168, Sept. 1953.

TRAINING:

Automobile Driving for the Severely Disabled (Rowley, T. J.) 7:175, Sept. 1953.

TUBERCULOSIS:

Tuberculosis, Pulmonary, The Emotional Components and Concomitants of (Levin, A. R.) 7:211, Nov. 1953.

BOOK REVIEWS

-A-

Aged, Physical Medicine and Rehabilitation for the (McClellan, W. S.) 7:25, Jan. 1953.

Aged, Stability of Body Function in the Effect of Exposure of the Body to Heat (Krag, C. L. and Kountz, W. B.) 6:27, Nov. 1952.

Aging, Problem of (Shock, N. W.) 7:187, Sept. 1953.

Artificial Respiration, Adventures in (Karpovich, P.) 7:187, Sept. 1953.

-B-

Behavior: The Moral Theory of (Barta, F. R.) 7:25, Jan. 1953.

-C-

Case Study, Psychiatric: A Manual For (Menninger, K. A.) 6:26, Sept. 1953.

Cybernetics: Circular Casual and Feedback Mechanisms in Biological and Social Systems (Foerster, H.) 7:187, Sept. 1953.

-D-

Dictionary, Medical: Blakiston's Illustrated Pocket (Hoerr, N. L. and Chase, S. W. and Francis, C. C., and Howell, M. G. and Moore, L. E.) Nov. 1952.

Disability, Evaluation of Industrial (Thurber, P.) 7:187, Sept. 1953.

-E-

Exercise, Physiology of (Moorehouse, L. E. and Miller, A. T.) 7:43, July, 1953.

-F-

Football Fatalities, The Twenty-first Annual Survey of (Easterwood, F. R.) 7:143, July, 1953.

(Schneck, J. M.) 7:221, Nov. 1953.

-I-

Illness, Prolonged (Research Council for Economic Security) 7:187, Sept. 1953.

Intramural Sports: The Organization

and Administration of (Means, L. E.) 7:221, Nov. 1953.

-K-

Kinesiology: Basic (Lipovich, F. J.) 7:221, Nov. 1953.

Kinesiology: The Mechanical and Anatomic Fundamentals of Human Motion (Wells, K. F.) 7:57, Mar. 1953.

-L-

Law of Hospital, Physician, and Patient (Hoyt, E. and Hoyt, L. R. and Groeschel, A. H.) 7:92, May, 1953.

Light Therapy (Kovacs, R.) 7:221, Nov. 1953.

-M-

Manual Therapy (Mennell, J. B.) 7:92, May, 1953.

Mobilization of the Human Body (Billig, H. E.) 7:25, Jan. 1953.

-N-

Nervous System, The Treatment of Injuries to the (Munro, D.) 7:57, Mar. 1953.

-O-

Orthopedics, A Textbook of: With a Section on Neurology in Orthopedics (Howorth, M. B.) 5:30, July, 1952.

-P-

Parents, Aging: You and Your (Stern, E. and Ross, M.) 5:30, July, 1952.

Physical Build vs. Athlete Ability in American Sports (Broderker, P.) 7:143, July, 1953.

Physical Capacities and Job Placement (Hanman, B.) 7:221, Nov. 1953.

Physical Medicine and Rehabilitation, The Yearbook of (Krusen, F. H. and Elkins, E. C. and Deaver, G. G.) 6:27, Nov. 1952.

Pools and Tanks, Therapeutic Use of (Lowman, C. L.) 7:57, Mar. 1953.

Psychiatry, Basic Problems in (Wortis, J., Editor) 7:221, Nov. 1953.

Psychiatry, Fundamentals of (Strecker, E. A.) 5:30, July, 1952.

-R-

Research Monograph (Fields, M. R. and Weiss, R. A.) 7:25, Jan. 1953.

Research—What Is It (Masley, J. W.) 6:27, 1952.

-S-

School Health and Health Education (Turner, C. E.) 5:30, July, 1952.

Speech Correction, Diagnostic Manual in (Johnson, W. and Darley, F. L., Spriesterback, D. L.) 7:92, May, 1953.

-T-

Therapy, Recreational: Clinical Applications of (Davis, J. E.) 6:26, Sept. 1952.

This Hospital Business of Ours (Sloan, R. P.) 7:92, May, 1953.

-W-

Writing, Medical: Prescription for (Jordan, E. P. and Sheppard, W. C.) 6:26, Sept. 1952.



Author Index

This list includes authors who have contributed Articles, Abstracts and Book Reviews. Abstracts indicated by (Ab); Book Reviews by (BR). See p. 229 for subject index.

-A-

- Adams, F. H., Tallman, F. F., Galioni, E. P.
7:219, Nov. 1953, (Ab)
Anderson, D. and Devins, G. V.
7:76, May 1953.
Ash, W. H.
7:53, March 1953 (Ab.)

-B-

- Bainbridge, G., et. al.
7:219, Nov. 1953 (Ab)
Balsam, F. J.
7:18, Jan. 1953
Barnett, L. R.
5:23, July 1952.
Barta, F. R.
7:25, Jan. 1953 (BR)
Billig, H. E.
7:25, Jan. 1953 (BR)
Black, D. H. & Johnson, W. R.
7:183, Sept. 1953 (Ab)
Boone, J. C.
7:166, Sept. 1953
Brenner, H. J. & Rasch, P. J.
6:15, Nov. 1952
Brodecker, P.
7:143, July 1953 (BR)
7:170, Sept. 1953

-C-

- Chase, S. W., Francis, C. C., Howell, M. G. Moore, L. E. & Hoerr, N. L.
6:27, Nov. 1952 (BR)
Clarke, H. H.
7:8, Jan. 1953
Clarke, H. H.
7:44, Mar. 1953
Clark, W. A. & Francis, R. L.
7:170, Sept. 1953
Cooke, W. T.
5:27, July 1953 (Ab)
Copley, A. L.
7:54, Mar. 1953 (Ab)
Cureton, T. K.
7:219, Nov. 1953 (Ab)

-D-

- Darley, F. L., Spriesterbach, D. L. & Johnson, W.
7:92, May 1953 (BR)
Davis, J. E.
6:26, Sept. 1952 (BR)
Davis, J. E. & Nyquist, R. H.
6:3, Sept. 1952
Davis, J. E.
7:139, July 1953 (Ab)
Deaver, G. G., Krusen, F. H. & Elkins, E. C.
7:27, Nov. 1952 (BR)
Devins, G. V. & Nyquist, R. H.
6:13, Nov. 1952
Devins, G. V. & Anderson, D.
7:76, May 1953
Devins, G. V. & Manson, M. P.
7:88, May 1953 (Ab)

-E-

- Easterwood, F. R.
7:143, July 1953 (BR)

- Eberhart, H. D., Saunders, J. B. & Inman, V. T.
7:219, Nov. 1953 (Ab)
Edholm, O. G. & Floyd, W. F.
7:21, Jan. 1953 (Ab)
Edman, L. E.
6:4, Nov. 1952
Editorial (J.A.M.A.)
7:21, Jan. 1953 (Ab)
Editorial (The Lancet)
7:46, July 1953 (Ab)
Eisenson, J. & Morrow, R. S.
7:84, May 1953
Elkins, E. C., Deaver, G. G. & Krusen, F. H.
6:27, Nov. 1952 (BR)
Elliott, W. H. & Sutherland, V. C.
7:183, Sept. 1953 (Ab)
Ershoff, B. H.
7:22, Jan. 1953 (Ab)

-F-

- Ferlaine, F. R.
7:146, July 1953 (Ab)
Ficarra, B. J.
6:21, Sept. 1952 (Ab)
Fields, M. R. & Weiss, R. A.
7:25, Jan. 1953 (BR)
Fleer, P. F.
5:12, July 1952
Floyd, W. F. & Silver, P. H. S.
5:27, July 1952 (Ab)
Floyd, W. F. & Edholm, O. G.
7:21, Jan. 1953 (Ab)
Foerster, H. (Editor)
7:187, Sept. 1953 (BR)
Fowlks, E. W.
7:71, May 1953
Francis, C. C., Howell, M. G., Moore, L. E., Hoerr, N. L. & Chase, S. W.
6:27, Nov. 1952 (BR)
Francis, R. L. & Clark, W. A.
7:170, Sept. 1953
Fraser, D. C.
7:183, Sept. 1953 (Ab)

-G-

- Galioni, E. P., Adams, F. H. & Tallman, F. F.
7:219, Nov. 1953 (Ab)
Goff, C. W.
7:22, Jan. 1953 (Ab)
Griffith, J. C.
6:3, Nov. 1952
Groeschel, A. H., Hayt, H. & Hayt, L. R.
7:92, May, 1953 (BR)
Gross, E. A.
7:36, March 1953

-H-

- Hanman, B.
7:221, Nov. 1953 (BR)
Harper, R. M. J.
5:26, July 1952 (Ab)
Harvey, W. P. & Levine, S. A.
7:54, March, 1953 (Ab)

- Hawk, J. M. & Robertson, T. S.
6:7, Sept. 1952
Hayt, H., Hayt, L. R., Groeschel, A. H.
7:29, May 1953 (BR)
Hayt, L. R., Groeschel, A. H., Hayt, H.
7:52, May 1953 (BR)
Hildreth, H.
7:48, March 1953
Hill, M.
7:146, July 1953 (Ab)
Hoerr, N. L., Chase, S. W., Francis, C. C., Howell, M. G. & Moore, L. E.
6:27, Nov. 1952 (BR)
Holsopple, J. Q.
6:4, Nov. 1952
Hoff, E. C.
7:183, Sept. 1953 (Ab)
Howell, M. G., Moore, L. E., Hoerr, N. L., Chase, S. W. & Francis, C. C.
6:27, Nov. 1952 (BR)
Howorth, M. B.
5:30, July 1952 (BR)

-I-

- Inman, V. T., Eberhart, H. D. & Saunders, J. B.
7:219, Nov. 1953 (Ab)

-J-

- Jahn, R.
7:210, Nov. 1953
Jahn, R. & Nyquist, R. H.
7:17, Jan. 1953
Jahn, R., & Nyquist, R. H.
7:27, July 1953
Jenkins, R. L.
7:201, Nov. 1953
Johnson, E. & Klein, K. K.
7:130, July 1953
Johnson, W., Darley, F. L. & Spriesterbach, D. L.
7:92, May 1953 (BR)
Johnson, W. R. & Black, D. H.
7:183, Sept. 1953 (Ab)
Jordan, E. F. & Sheppard, W. C.
6:26, Sept. 1952 (BR)

-K-

- Kabat, H. & Levine, M. G.
7:54, March 1953 (Ab)
Karpovich, P. V.
7:187, Sept. 1953 (BR)
Kent, Herbert
6:21, Sept. 1952 (Ab)
Keys, J. J., Psaki, R. C. & Moore, W. H.
7:180, Sept. 1953
Klein, K. K.
6:16, Sept. 1952
Klein, K. K. & Johnson, E.
7:130, July 1953
Kountz, W. B. & Krag, C. L.
6:27, Nov. 1952 (BR)
Krag, C. L. & Kountz, W. B.
6:27, Nov. 1952 (BR)
Kraus, H.
6:12, Sept. 1952

Kovacs, R.
7:221, Nov. 1953 (BR)
Krusen, F. H., Elkins, E. C.
& Deaver, G. G.
6:27, Nov. 1952 (BR)
Kuitert, J. H. & Templer, R. C.
7:3, Jan. 1953

—L—

Lefkovits, A.
7:168, Sept. 1953
Lerman, N. & Weber, B.
6:18, Sept. 1952
Levin, A. R.
7:211, Nov. 1953
Levine, M. C. & Kabat, H.
7:54, March 1953 (Ab)
Levine, S. A. & Harvey, W. P.
7:54, March, 1953 (Ab)
Libet, B. & Ralston, H. J.
7:219, Nov. 1953 (Ab)
Lipovich, F. J.
7:221, Nov. 1953 (BR)
Little, L., Upjohn, H. L., Shea, J. A.
& Stare, F. J.
7:139, July 1953 (Ab)
Lowman, C. L.
7:57, March 1953 (BR)

—Mc—

McClellan, W. S.
7:25, Jan. 1953 (BR)
McCloy, C. H.
7:114, July 1953

—M—

Mahoney, F. I.
6:4, Nov. 1952
Manson, M. P. & Devins, G. V.
7:88, May 1953 (Ab)
Mantovano, L. F.
7:35, March 1953
Marks, M. H. & Worchel, P.
6:21, Sept. 1952 (Ab)
Marusak, F. M.
7:205, Nov. 1953
Masley, J. W.
6:27, Nov. 1952 (BR)
Mennell, J. B.
7:92, May 1958 (BR)
Means, L. E.
7:221, Nov. 1953 (BR)
Menninger, K. A.
6:26, Sept. 1952 (BR)
Millen, F. J.
7:68, May 1953
Miller, A. T. & Moorehouse, L. E.
7:143, July 1953 (BR)
Morehouse, L. E.
7:39, March 1953
Morehouse, L. E. & Miller, A. T.
7:143, July 1953 (BR)
Moore, L. E., Hoerr, N. L., Chase, S. W.
Francis, C. C. & Howell, M. G.
6:27, Nov. 1952 (BR)
Moore, W. H., Keys, J. J. &
Psaki, R. C.
7:180, Sept. 1953
Morrow, R. S. & Eisenson, J.
7:84, May 1953
Munro, D.
7:57, March 1953 (BR)

—N—

Newman, L. B.
7:67, May 1953
Newsweek
6:21, Sept. 1952 (Ab)

Nyquist, R. H. & Devins, G. V.
6:13, Nov. 1952
Nyquist, R. H. & Jahn, R.
7:17, Jan. 1953
Nyquist, R. H. & Jahn, R.
7:127, July 1953

—O—

Ober, Frank R.
6:21, Sept. 1952 (Ab)
Oldfield, R. C.
7:139, July 1953 (Ab)
Ozarin, L. D.
7:22, Jan. 1953 (Ab)

—P—

Pace, N.
7:183, Sept. 1953 (Ab)
Painter, C. W.
7:132, July 1953
Pastor, P. J.
7:215, Nov. 1953
Pauncz, A.
7:134, July 1953
Pennington, L. A.
7:12, Jan. 1953
Phelps, W. M.
7:21, Jan. 1953 (Ab)
Piaskoski, R.
6:4, Nov. 1953
Psaki, R. C., Moore, R. H.
& Keys, J. J.
7:180, Sept. 1953

—Q—

Quamme, H. J.
7:136, July 1953

—R—

Ralston, H. J. and Libet, B.
7:219, Nov. 1953 (Ab)
Rasch, P. J. & Brenner, H. J.
6:15, Nov. 1952
Reid, R. D.
7:139, July 1953 (Ab)
Research Committee AART,
7:139, July 1953 (Ab)
Research Committee AART
7:139, July 1953 (Ab)
Research Council
7:187, Sept. 1953 (BR)
Robertson, T. S. & Hawk, J. M.
6:7, Sept. 1952
Ross, M. & Stern, E. M.
5:30, July 1952 (BR)
Rowley, T. J.
7:175, Sept. 1953
Rudd, J. L.
6:10, Sept. 1952

—S—

Sandow, A.
7:53, March 1953 (Ab)
Saunders, J. B., Inman, V. T.,
Eberhart, H. D.
7:219, Nov. 1953 (Ab)
Scheibert, C. D.
7:74, May 1953
Schilesinger, E. B.
7:21, Jan. 1953 (Ab)
Schilling, J. A.
6:24, Nov. 1952 (Ab)
Schneck, J. M.
7:221, Nov. 1953 (BR)
Schweitzer, F.
7:77, May 1953
Shea, J. A., Stare, F. J., Little, L.
& Upjohn, H. L.

7:139, July 1953 (Ab)
Sheppard, W. C., & Jordan, E. P.
6:26, Sept. 1952 (BR)
Shock, N. W. (Editor)
7:187, Sept. 1953 (BR)
Silver, P. H. S. & Floyd, W. F.
5:27, July 1952 (Ab)
Sloan, R. P.
7:92, May 1953 (BR)
Spriesterbach, D. L. & Johnson, W. T.
Darley, F. L.
7:92, May 1953 (BR)
Stare, F. J., Little, L., Upjohn, H. L.
& Shea, J. A.
7:139, July 1953 (Ab)
Steinberg, D. L.
6:4, Nov. 1952
Stern, E. M. & Ross, M.
5:30, July 1952 (BR)
Stieglitz, E. J.
7:53, March 1953 (Ab)
Straus, E. W.
7:54, March 1953 (Ab)
Strecker, E. A.
5:30, July 1952 (BR)
Sutherland, V. C. & Elliott, H. W.
7:183, Sept. 1953

—T—

Talbot, H. S.
7:87, May 1953 (Ab)
Tanner, J. M.
7:219, Nov. 1953 (Ab)
Templer, R. C. & Kuitert, J. H.
7:3, Jan. 1953
Thomson, J. E. M. & Zimmer, H.
5:26, July 1952 (Ab)
Tallman, F. F., Galioni, E. P. &
Adams, F. H.
7:219, Nov. 1953 (Ab)
Thomson, J. E. M. & Zimmer, H.
7:21, Jan. 1953 (Ab)
Thorndike, A.
6:21, Sept. 1952 (Ab)
Thurber, P. et al.
7:187, Sept. 1953 (BR)
Tompkins, H. J.
7:189, Nov. 1953
Towne, M.
6:4, Nov. 1952
Turner, C. E.
5:30 July 1952 (BR)

—U—

Upjohn, H. L., Shea, J. A. Stare, F. J.
& Little, L.
7:139, July 1953 (Ab)

—V—

VA Information Bulletin 1-29
7:138, July 1953 (Ab)
Van Den Berg, J. H.
7:183, Sept. 1953 (Ab)
VanSchoick, J. H.
7:14, Jan. 1953

—W—

Wakim, K. G.
6:18, Nov. 1952 (Ab)
Watkins, A. L.
6:21, Sept. 1952 (Ab)
Weber, B.
6:18, Sept. 1952
Webster, R. F.
7:50, March 1953

Weiss, R. A. & Fields, M. R.
7:25, Jan. 1953 (BR)
Wells, K. F.
7:57, March 1953 (BR)
Wessel, R. H.
7:155, Sept. 1953
Wilbur, E. A.

7:123, July 1953
Willhite, C. E.
7:82, May 1953
Williams, H. E.
7:120, July 1953
Worchel, P. & Marks, M. H.
6:21, Sept. 1952 (Ab)

Wortis, J.
7:221, Nov. 1953 (BR)
—Z—
Zimmer, H. & Thompson, J. E. M.
5:26, July 1952 (Ab)
Zimmer, H. & Thomson, J. E. M.
7:21, Jan. 1953 (Ab)

TWENTY EXERCISE THERAPISTS NEEDED AT ONCE

(Appearing on the list of vacancies in the CORRECTIVE THERAPY SECTIONS of the Veterans Administration, are the following:)

Buffalo, N. Y.....	1-GS-5	Little Rock, Ark.....	1-GS-5
Canandaigua, N. Y.....	1-GS-7	Perry Point, Md.....	2-GS-5
Chicago, Ill. (Research).....	3-GS-7	Northport, N. Y.....	1-GS-5
Chillicothe, Ohio.....	2-GS-5	Richmond, Va.....	1-GS-5
Cleveland, Ohio.....	2-GS-5	Roanoke, Va.....	1-GS-5
Dublin, Ga.....	1-GS-5	Roseburg, Ore.....	1-GS-5
Fort Lyon, Colorado.....	1-GS-5	Tomah, Wisconsin.....	1-GS-5
Vancouver, Wash.....	1-GS-5		

Handicapped Drivers!

DRIVE YOUR CAR

—SAFELY
—EASILY
with new
Mechanical
GAS & BRAKE

**HAND
CONTROLS**

\$39.50

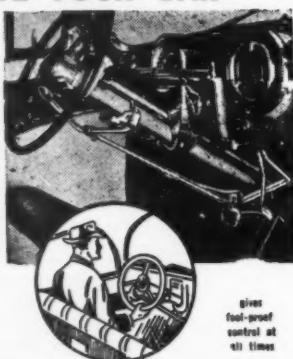
Plus postage
with copy
of this ad
KIT CAN BE
INSTALLED
IN 2 HOURS

Here's the greatest development in handicapped driver controls. One lever does both operations—works both brake and gas—makes your car absolutely fool-proof. The slightest touch of your fingers now operates your car! Thirty years' experience in building automatic clutch and brake controls have gone into this new development.

CALL or WRITE for FREE PAMPHLET
—be convinced!

BRAKES
Long Island's largest
brake specialists

3716 QUEENS BLVD.
LONG ISLAND CITY
NEW YORK
Stillwell 4-6417



gives
foot-proof
control at
all times

Examinations for Corrective Therapist GS-5/9

A new announcement on CORRECTIVE THERAPIST GS-5 through GS-9 was issued by the U. S. Civil Service Commission on Aug. 18, 1953. This announcement will combine the register now maintained by the Board on EXERCISE THERAPY GS-5 established under announcement No. 299 with the register now to be established under announcement No. 377. Those who filed in the earlier examination need not file under the new. The registers established under Announcement No. 377 will be used for the conversion of indefinite employees to probational status and for the filling of all vacancies in this field in grades GS-5 through GS-9. Since this position is in a great shortage category it is requested that the announcement be brought to the attention of all members of CORRECTIVE THERAPY STAFFS and the notice be given all possible publicity.

Since examining jurisdiction for CORRECTIVE THERAPIST grades GS-5 through GS-9 has been centralized, Standard Forms 59 for non-competitive actions involving CORRECTIVE THERAPIST positions in these grades which would ordinarily have been sent to the Commission's Regional Office for approval of qualifications, should hereafter be forwarded to this Board.

John William Moylneau
Chairman, Central Board
U. S. Civil Service Examiners

WORLD'S FINEST AND MOST COMPLETE LINE OF METAL FOLDING WHEEL CHAIRS, WALKERS AND INVALID AIDS

Trademark  of Quality

THE MODELS ILLUSTRATED BELOW ARE ONLY A PART OF OUR COMPLETE LINE



MODEL SU20-15
STANDARD ADULT
UNIVERSAL



MODEL BU20-15
UNIVERSAL WITH
8" CASTERS



MODEL SJU20-15
STANDARD JUNIOR
16" UNIVERSAL



MODEL BJU20-15
JUNIOR 16"
WITH 8" CASTERS



MODEL SKU20-15
STANDARD JUNIOR
13" UNIVERSAL



MODEL STU20-HI-15
TINY TOT UNIVERSAL
HIGH SEAT



MODEL STU20-LO
TINY TOT UNIVERSAL
LOW SEAT



MODEL STT20
TINY TOT
TRAVELER



MODEL BU20-76-15
SWINGING DETACHABLE
FOOTRESTS



MODEL SU20-744-15
HOSPITAL CHAIR WITH
ELEVATING LEGRESTS



MODEL BA20-15
UNIVERSAL AMPUTEE
NO. 1



MODEL BA20-70-15
UNIVERSAL AMPUTEE
NO. 2



MODEL BA20-72-15
UNIVERSAL AMPUTEE
NO. 3



MODEL SU20-13-15
ONE ARM DRIVE
UNIVERSAL



MODEL BU25-15
8" CASTERS &
DETACHABLE ARMS



MODEL SU25-15
5" CASTERS AND
DETACHABLE ARMS



MODEL BU21-744-15
SEMI-RECLINING BACK
AND 8" CASTERS



MODEL BU25-41-754-15
SEMI-RECLINING BACK
& DETACHABLE ARMS



MODEL BU28-754-15
FULL-RECLINING BACK
& DETACHABLE ARMS



MODEL BU27-744-15
FULL-RECLINING BACK
& 8" CASTERS



MODEL BU23-618-15
HEAVY DUTY
UNIVERSAL



MODEL BT20-14
CUSTOM
CHAIN DRIVE



MODEL BU20-12
CUSTOM
LEVER DRIVE



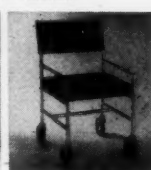
MODEL ST20-15
TRAVELER WITH
5" CASTERS



MODEL BT20-15
TRAVELER WITH
8" CASTERS



MODEL SW20-18
WALKER WITH CRUTCH
ATTACHMENTS



MODEL SF20-3
GLIDEABOUT CHAIR
WITH 3" ARMS



MODEL SF10
GLIDEABOUT
WITHOUT ARMS



MODEL SF20-7
GLIDEABOUT WITH
7" ARMS



MODEL SF25
GLIDEABOUT WITH
DETACHABLE ARMS



MODEL SC25
FOLDING TOILET
COMMODORE



MODEL 11C25-917
FOLDING BEDSIDE
COMMODORE



MODEL SP10
FOLDING PULLMAN
GLIDEABOUT



HOYER LIFTER
ADJUSTABLE BASE
EASY TO OPERATE

FOR NEAREST DEALER AND CATALOG - CONSULT CLASSIFIED TELEPHONE BOOK OR WRITE TO

761 N. HIGHLAND AVE. *Everest and Jennings, Inc.* LOS ANGELES 38, CALIF.

Classified Directory

Price of Directory Listing for one year—6 issues—\$10.00

STORES WHERE EVEREST AND JENNINGS PRODUCTS MAY BE PURCHASED

BISHOFF's, 1618 Franklin St., Oakland 12, California	
BOWERS AMBULANCE SERVICE, 430 E. Pacific Coast Highway, Long Beach, California	
DECKERT SURGICAL CO., 409 S. Main St., Santa Ana, California	
MATTHAYS, 809 S. Hill St., Los Angeles 14, California	TR 5849
MAPLE HILL, INC., 143 Main St., Hartford 3, Connecticut	
THE D. G. STOUGHTON CO., 249-255 S. Whitney St., Hartford 5, Connecticut	
WATERBURY MEDICAL EQUIPMENT SUPPLY, 1395-1397 Baldwin St., Waterbury, Connecticut	
YALE SURGICAL CO., 1004 Grand Ave., New Haven 11, Connecticut	
AMEDIC SURGICAL CO., 1661-65 W. Flagler St., Miami 35, Florida	9-4533
CHICAGO WHEEL CHAIR CO., 1071 W. Ogden Ave., Chicago 12, Illinois	SE 8-1111
DEBS HOSPITAL SUPPLIES, INC., 118 S. Clinton St., Chicago 6, Illinois	FR 2-3424
V. MUELLER & CO., 320 S. Honore St., Chicago 12, Illinois	SE 3-2180
ARRON SURGICAL HOUSE, INC., 217-223 N. Pennsylvania St., Indianapolis 4, Indiana	LI 1506
REGER's, 717 N. Main, Hutchinson, Kansas	2-2375
SALINA SICK ROOM RENTS SERVICE, Rentals and Sales, 116 S. 5th St., Salina, Kansas	
PEACOCK SURGICAL CO., INC., 1235 Texas Ave., Shreveport, Louisiana	Day 3-5276—Night 7-4910
BETH-MONT SURGICAL SUPPLY CO., 4610 East-West Highway, Bethesda 14, Maryland	Oliver 4-6633
THE COLSON-MERRIAM CO., 1623 N. Aisquith St., Baltimore, Maryland	Mulberry 2847
MASSACHUSETTS SURGICAL, INC., 224 Maple St., Holyoke, Massachusetts	Dial 2-0298
MEDICAL ARTS SURGICAL SUPPLY CO., 20-22-24 Sheldon Ave., S. E., Grand Rapids 2, Michigan	
C. F. ANDERSON, INC., Surgical and Hospital Equipment, 901 Marquette Ave., Minneapolis 2, Minnesota	
PHYSICIANS & HOSPITALS SUPPLY CO., INC., 1400 Harmon Place, Minneapolis 3, Minnesota	
HARRINGTON SURGICAL SUPPLY, 218 N. Main St., Butte, Montana	6542
CROSBY SURGICAL CO., 111 N. 18th St., Omaha, Nebraska	
SEILER SURGICAL CO., INC., 111 S. 17th St., Omaha 2, Nebraska	Atlantic 5825
AMSTERDAM BROTHERS, 1060 Broad St., Newark 2, New Jersey	Market 2-1335
ARTHUR A. BEITMAN C. P. CO., 44 William St., Newark 2, New Jersey	
BELLEVUE SURGICAL SUPPLY CO., 52-54 Garden St., Passaic, New Jersey	
BURLINGTON SURGICAL APPLIANCES, 314 High St., Burlington, New Jersey	Burlington 3-0052
COMMEVO SURGICAL SUPPLY CO., 256 River St., Hackensack, New Jersey	Diamond 3-5555
ELMIRA DRUG & CHEMICAL CO., 157 Baldwin St., Elmira, New York	6289
DOWD CHAIR RENTAL & SALES, 392 Franklin St., Buffalo, New York	Cleveland 3335
DOWD CHAIR RENTAL & SALES, 138 South Highland Ave., Pittsburgh 6, Pennsylvania	Montrose 1-5355
DOWD CHAIR RENTAL & SALES, 4848 Woodward Ave., Detroit 1, Michigan	Temple 3-3490
DOWD CHAIR RENTAL & SALES, 2245 Biscayne Blvd., Miami 37, Florida	2-2152
DOWD CHAIR RENTAL & SALES, (Canada) LTD., 589 Yonge St., Toronto 5, Ontario, Canada	Princess 6644
HOLMES, AMBULANCE & OXYGEN SERVICE, 486 Flatbush Ave., Brooklyn 25, New York	
MAYFLOWER SURGICAL SUPPLY CO., 2515 86th St., Brooklyn, New York	
NASSAU SURGICAL APPLIANCE CO., Manufacturers and Fitters of Artificial Limbs and Braces, 362 Fulton Ave., Hempstead, New York	2-3460
NATIONAL HOSPITAL SUPPLY CO., INC., 38 Park Row, New York 7, New York	Worth 2-4947
PROFESSIONAL SURGICAL SUPPLY, INC., 74-19 Roosevelt Ave., Jackson Heights 72, New York	Havemyer 4-0300
JEFFREY-FELL CO., 1700 Main St., Buffalo 9, New York	Garfield 1700
HAROLD SUPPLY CORP., 100 5th Ave., New York 11, New York	Chelsea 2-2500
REHABILITATION EQUIPMENT, INC., 1333 York Ave., New York 21, New York	Regent 7-7740
SCULLY-WALTON, 254 69th St., New York 23, New York	SU 7-5200
SOCIAL SURGICAL APPLIANCE CENTER, 838 Broadway, New York 3, New York	ALgonquin 4-3509
ALEXANDER SURGICAL SUPPLY CO., 375 E. Broad St., Columbus 15, Ohio	MA 4860
FIDELITY MEDICAL SUPPLY CO., 1st & St. Clair Sts., Dayton 2, Ohio	MI 7636
THE CLEVELAND ORTHOPEDIC CO., 5904 Euclid Ave., Cleveland 3, Ohio	HE 1-8484
GRANT G. FORSYTHE, 11 E. 6th St., Tulsa 3, Oklahoma	
SHAW SURGICAL CO., 902-912 S. W. Yamhill St., Portland 7, Oregon	BR 3456
BELLEVUE SURGICAL SUPPLY CO., INC., 126-128 N. 5th St., Reading, Pennsylvania	
E. A. WARNICK CO., Simon Long Bldg., 50-52 S. Main St., Wilkes-Barre, Pennsylvania	2-8064
HEYL PHYSICIANS SUPPLY CO., 419 State St., Erie, Pennsylvania	2-6785
THE CLAFLIN CO., 40 Mathewson St., Providence 3, Rhode Island	GA 1-5800
KAY SURGICAL, INC., 1144 Madison Ave., Memphis, Tennessee	7-7415
DELTA SURGICAL, INC., 912 Madison Ave., Memphis, Tennessee	5-6626
SAM FORTAS HOUSE FURNISHING CO., INC., Main & Poplar, Memphis 3, Tennessee	5-3515
SOUTHERN SURGICAL SUPPLY CO., 909 Madison Ave., Memphis, Tennessee	5-3200
RICHARDS MFG. CO., 756 Madison Ave., Memphis, Tennessee	8-2566
BLACKWELL MATTRESS CO., 2610 Texas Ave., Lubbock, Texas	7962
POWERS & ANDERSON, INC., 2-4 South 5th St., Richmond 2, Virginia	2-6589
HORNE ORTHOPEDIC APPLIANCE CO., 8 W. Poplar, Walla Walla, Washington	5152
HOSPITAL AMBULANCE, OXYGEN & EQUIPMENT CO., INC., 1823 'L' St., N. W., Washington 6, D. C.	ME 3900
KLOMAN INSTRUMENT CO., INC., 1822 Eye St., N. W., Washington 6, D. C.	
THE COLSON-MERRIAM CO., 703 Transportation Bldg., Washington 6, D. C.	National 0011
DOERFLINGER'S SURGICAL & ORTHOPEDIC APPLIANCES, 252 W. Fond du Lac Ave., Milwaukee 6, Wisconsin	HI 2-2525
HOUSE OF BIDWELL, INC., 604 N. Water St., Milwaukee 2, Wisconsin	BR 2-4369
ROEMER DRUG CO., 606 N. Broadway, Milwaukee 2, Wisconsin	MA 8-0911

STORES WHERE EVEREST AND JENNINGS PRODUCTS MAY BE RENTED

ABBEY RENTS, 600 S. Normandie Ave., Los Angeles 5, California	DU-4-5292; PL-2-3131
ABBEY RENTS, 2841 S. El Camino Real, San Mateo, California	CI-3-2101; SI-4-1174; CR-1-2103; SY-6-9293; EX-4-3232
ABBEY RENTS, 1827 "J" Street, Sacramento 14, California	FI-5-5775
ABBEY RENTS, 1761 American Ave., Long Beach, California	HU-4-9151
ABBEY RENTS, 2895 El Cajon Blvd., San Diego, California	LB-6-6264
ABBEY RENTS, 1314 Post Street, San Francisco, California	Talbot 1-8151
ABBEY RENTS, 2315 Broadway, Oakland, California	GR-4-2525
ABBEY RENTS, 350 Broadway, Denver, Colorado	HI-4-8181
ABBEY RENTS, 310 S. Ninth St., Minneapolis 2, Minnesota	PE-4-651
ABBEY RENTS, 4041 Broadway, Kansas City, Missouri	Lincoln 8931 (Mpls.) Midway 6170 (St. Paul)
ACME-ABBEY RENTS, 3230 Washington Blvd., St. Louis 3, Missouri	Jefferson 5200
ABBEY RENTS, 1000 E. Burnside, Portland, Oregon	Franklin 5700
BEST RENTALS, 2025 S. Shepherd Drive, Houston 2, Texas	Filmore 5001
ABBEY RENTS, 1000 Pike Street, Seattle, Washington	Keystone 4416
ABBEY RENTS, 2824 W. Fond du Lac Ave., Milwaukee 10, Wisconsin	Seneca 5040
	Uptown 3-2000

MANUFACTURERS OF ORTHOPEDIC AND PROSTHETIC APPLIANCES

BIRMINGHAM ARTIFICIAL LIMB CO., 410 N. 19th St., Birmingham 3, Alabama	3-1786
THE WINKLEY ARTIFICIAL LIMB CO., 908 6th Ave., Des Moines, Iowa	4-2323
JACKSON BRACE & LIMB CO., 1224 N. State St., Jackson, Mississippi	
STANDARD ARTIFICIAL LIMB CO., INC., 1902-04 Olive St., St. Louis 3, Missouri	Central 1158
UNITED ORTHOPEDIC APPLIANCE CO., 791 Broadway, New York, New York	
W. T. HINNANT ARTIFICIAL LIMB CO., 120 E. Kingston Ave., Charlotte, North Carolina	
FIDELITY ORTHOPEDIC, 5th and Main Sts., Dayton 2, Ohio	
W. F. LAFORSCH, ORTHOPEDIC APPLIANCES, 536 Valley St., Dayton 4, Ohio	FU 5462
GEORGE S. ANDERSEN CO., 3419 Walnut St., Philadelphia 4, Pennsylvania	
MODERN LIMB & BRACE CO., 1133 S. 19th St., Harrisburg, Pennsylvania	
SNELL'S ARTIFICIAL LIMB CO., 1916 West End Ave., Nashville 4, Tennessee	
GONZALES WARM SPRINGS FOUNDATION FOR CRIPPLED CHILDREN, INC., P. O. Box 58, Gonzales, Texas	
THE FIT-WELL ARTIFICIAL LIMB CO., 125 W. 3rd St., South, Salt Lake City 1, Utah	4-6741
MARVIN F. POLLARD CO., 1412 E. Broad St., Richmond, Virginia	3-8656
HERMAN J. GEISLER, FACILITIES FOR THE HANDICAPPED, 390 Cedar St., Fond du Lac, Wisconsin	989

UNCLASSIFIED

THE VASO-PNEUMATIC, MFGD. BY POOR & LOGAN MFG. CO., 7319 Varna Ave., North Hollywood, California	
HURL-O-DART MANUFACTURING CO., "The Ideal Lawn or Beach Game," 2242 Union St., Indianapolis 2, Indiana	GA 2242
PARAVOX HEARING AIDS, Elm Creek, Nebraska	2231
HAUSTED MANUFACTURING CO., Hospital Equipment, Medina, Ohio	5-1803
THE LIEBEL-FLARSHEIM CO., Manufacturers of Apparatus for Physical Medicine, Cincinnati 15, Ohio	PO 2700
INVALID CHAIR CO., 2124 N. 45th St., Milwaukee, Wisconsin	HI 4-7756
NATIONAL SPORTS EQUIPMENT CO., 360-370 N. Marquette St., Fond du Lac, Wisconsin	



Season's Greetings



Arnold Devices Incorporated
Brakes Incorporated
Everest and Jennings
Handicap Production
Hanger Artificial Limbs
Hughes Hand Control Agency
J. E. Porter Corporation
Keystone Artificial Limb Co.

Monitor "Aqua-Pedic"
Murdock Printing Co.
J. A. Preston Corporation
Olympian Industries
Porto-Lift Manufacturing Co.
Saniglastic Incorporated
Ted Hoyer and Co.
Walking Chair for Invalids

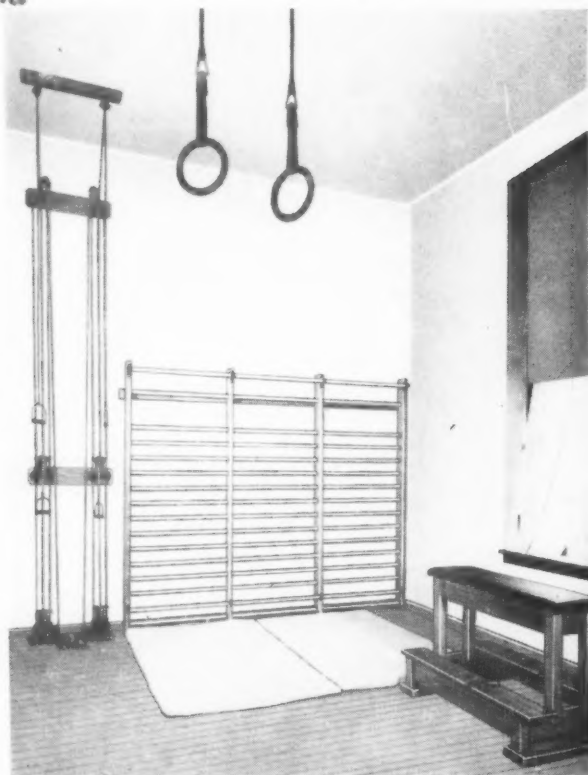
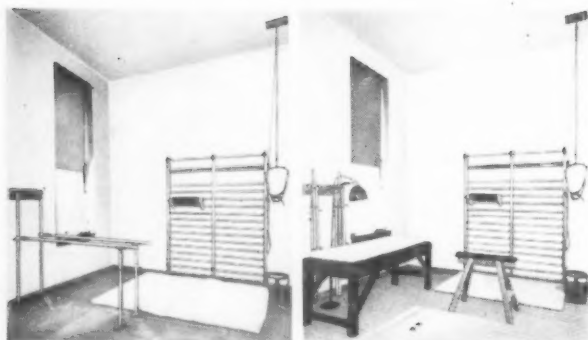
PATRONAGE SINCERELY APPRECIATED

If not delivered in 5 days
return to
Stanley H. Wertz
1433 Railton Road
Memphis, Tennessee

State Universities of Iowa
Libraries
Serials Acquisitions
Iowa City, Iowa

SEC. 34.66 P. L. & R.
U. S. POSTAGE
PAID
MEMPHIS, TENN.
PERMIT NO. 143

APPARATUS FOR Corrective Therapy



Views above and left show well-equipped rooms in the physical therapy department of Michael Reese Hospital, Chicago. Porter supplies stall bars, gym mats, chest weights and a wide variety of highly specialized corrective devices described in a catalog which is yours for the asking.

Porter Corrective Therapy Apparatus is carefully manufactured from designs based on the recommendations and experiences of authorities in the field. Many of the devices are standard equipment in Physical Medicine Rehabilitation and Corrective Gymnastic work.

A catalog containing these standard items will be mailed on request. For therapists requiring special devices, Porter's engineering department is available for

working out new designs to meet new requirements.

Backed by nearly a century of quality manufacturing, The J. E. Porter Corporation is the world's largest makers of gymnasium, playground and swimming pool equipment. The same reputation that has made Porter a famous name among schools, universities and recreation leaders is your assurance in the choice of Porter as a source for dependable Corrective Therapy Apparatus.

Send for your free copy of the Porter catalog of Physio-Therapy Apparatus, sent without obligation on request.



THE J. E. PORTER CORPORATION
FACTORY AT OTTAWA, ILLINOIS

CHICAGO OFFICE: 664 N. Michigan Avenue, Chicago 11, Phone: SUperior 7-7262
NEW YORK OFFICE: 11 West 42nd Street, New York 18, Phone: LOnacre 3-1342

